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ON THE OCCURRENCE AND PATHOLOGY OF ENDEMIC GLANDULAR FEVER, A SPECIFIC FEVER, OCCURRING IN THE MOSSMAN DISTRICT OF NORTH QUEENSLAND.

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(From The Australian Institute of Tropical Medicine).

O. Smithson(1) called attention in 1910 to a specific fever, occurring throughout the Mossman district, situated in North Queensland, which he termed "Mossman Fever."

In the report of the Commissioner of Public Health of Queensland for 1913, Clarke(2) gives a detailed and exhaustive account of the distribution and symptomatology of this fever, summarizing his experiences, collected during six years of residence in the district.

Since Clarke's report appeared in a publication not generally accessible it was deemed advisable to make free use of his observations in the present communication.

Definition.

Endemic glandular fever is an acute disease, characterized by an irregular remittent fever of from three days to three weeks duration, accompanied by painless swelling of certain groups of superficial lymph glands, and by the appearance of a macular, or occasionally vesicular, rash.

History.

According to Clarke, the Mossman district was first opened up by Europeans in or about 1877, when timber-getters settled along the Daintree River, which is situated about 12 miles north of the present township of Mossman. A number of the early settlers informed him "that shortly after their arrival in the district cases of sickness occurred amongst them, of a continuous fever, lasting for several weeks, accompanied by swellings in the armpits and groin. They observed a similar disease amongst the aboriginal inhabitants" and stated "that this disease existed prior to their advent amongst the aborinals of the district.

A perusal of the hospital records furnishes definite statistics regarding the number of cases admitted to the Port Douglas Hospital, beginning from July, 1908. Earlier, malarial fever, dengue and this fever were classified indiscriminately as "fever." In 1907—during the time of the outbreak of plague in Australia—the disease was for a short period considered to be plague, although there was no death amongst the scores of cases admitted to the hospital. This diagnosis was based on the presence of enlarged lymphatic glands only, and had not been confirmed bacteriologically.

After 1908, for some unknown reason, the cases are referred to in the hospital records as filarial fever, though filarial larvæ had never been found with any regularity in the blood of the patients, and the resemblance between the two is but slight.

Mossman Fever.—Journal of Tropical Medicine, vol. XIII., No. 23, p. 351, 1910.
Annual Report of the Commissioner of Public Health, Appendix E1, Brisbane, 1913.

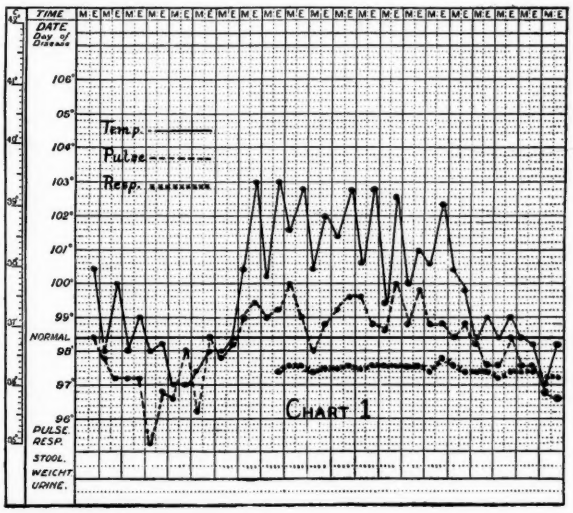
Distribution.

Clarke states that "the disease prevails between the coastal range of mountains and the sea, in the Mossman district, within a limited area, extending approximately 18 miles to the south and 30 miles to the north of the township of Mossman," a town situated at a latitude of 16° south, a few miles inland from Port Douglas. Dr. Clarke informed us personally that since writing his account he had seen sporadic cases of the same complaint from Mount Molloy and Mount Carbine (west of the town of Mossman, over the coastal range), and from Maytown and Bloomfield, near Cooktown.

One case treated at the Townsville Hospital had left the Mossman district nine days prior to the development of definite symptoms. He had, in all probability, contracted the fever before his departure.

Symptomatology.

Clarke gives six days as the latent period between the "reception of infection and the onset of symptoms," but remarks that "for a few days in some cases even as long as eight days preceding the onset of pyrexia, the patient suffers from a feeling of malaise, with diminished appetite." In one of the cases observed by us, the temperature rose suddenly on the eighth day after his admission to the hospital. The patient was suffering from cane boils, but for two days previously he had complained of headache and loss of appetite. The case treated in the Townsville Hospital developed symptoms nine days after leaving Port Douglas, so that the length of the incubation period, may to a certain extent, vary and may be as long as ten days.

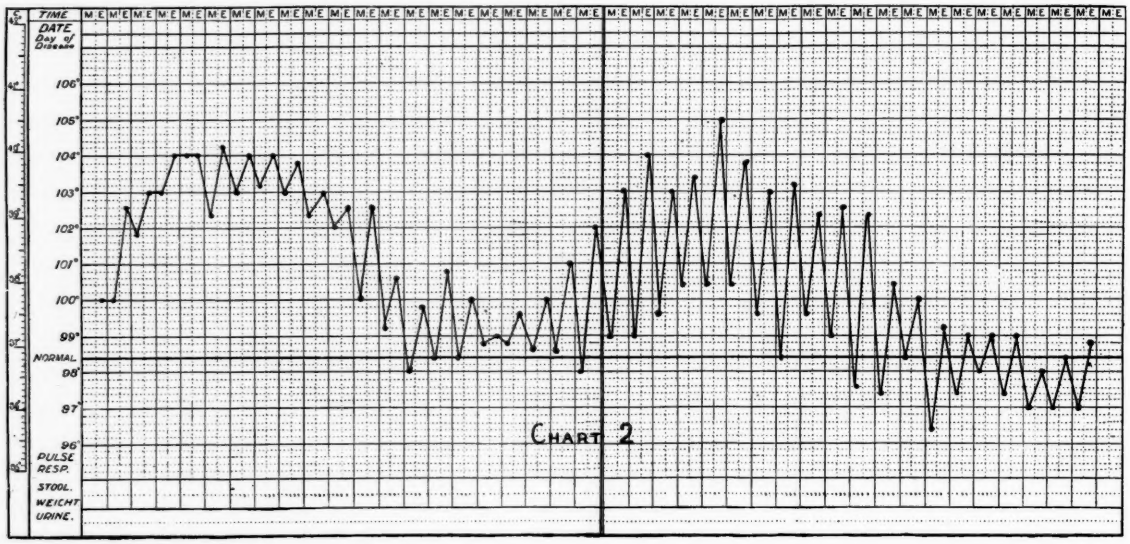


The anamnesis does not bring out any distinctive features. The disease begins with a general feeling

of malaise, with headaches, loss of appetite, accompanied by dry retching and vomiting. These symptoms become more and more marked as the disease progresses.

The temperature may rise suddenly (see Chart I.) or gradually (Chart II.), reaching its maximum within a few days, and is of a remittent type. Rigors

Skin.—All the cases observed by us—only 30 per cent. of Clarke's cases—developed a well-marked rash on the trunk, arms and legs, and occasionally on the face, simultaneously with, or a few days after, the rise of the temperature, persisting for two to four days, and disappearing without any apparent desquamation. It may take the form of copper col-



are seldom observed. The high temperature persists for about 10 days, but the time may vary from 3 days in a mild case, to 3 weeks or more in a severe case. After the period of pyrexia, the temperature falls by lysis.

The pulse-rate does not increase proportionately with the temperature. The pulse is soft, of low tension and often dicrotic. The rate of the respiration is not altered. Headaches, which may be purely frontal or occipital, are always present, and pains in the back of the eyes are common, accompanied by a certain degree of photophobia. The patients complain of pains in the back and limbs, but not to the same extent as in dengue fever. Anorexia is always noticed, and sleeplessness and nervous irritability are marked features.

The Lymphatic System.—An enlargement of certain groups of the superficial lymph glands, in the majority of the cases of the axillary and inguinal, less often of the cervical glands, is invariably present. A slight enlargement is often observed at the time of the onset of the fever, which becomes more marked as the disease progresses, so that during the height of the fever the lymph glands may be as large as a walnut, but do not, as a rule, exceed the size of a marble. They are hard, indolent and often tender on deep pressure, and do not show a tendency to abscess formation. As the fever abates, the swollen lymph glands decrease in size rapidly, though a slight enlargement may persist at times for months.

The spleen is not palpable, and the liver is normal in size.

oured macules, the slightly raised darker centre being surrounded by an erythematous halo, or may rarely be of vesicular character, closely resembling that of chickenpox.

The majority of the patients sweat profusely, mostly at night. The tongue is coated with a thick yellowish fur, which at a later stage becomes dark brown. Pains in the throat on swallowing are quite common, due to an hyperæmia of the pharynx. Vomiting of bile stained fluid often occurs. Most of the patients complain of constipation, but diarrhœa has been observed. The abdomen is not distended, nor is it tender on palpation. The urine does not show any changes beyond those due to the pyrexia, being concentrated and of dark colour.

The respiratory tract shows no changes other than an occasional slight bronchitis, and the heart is, except in very severe cases, but little affected.

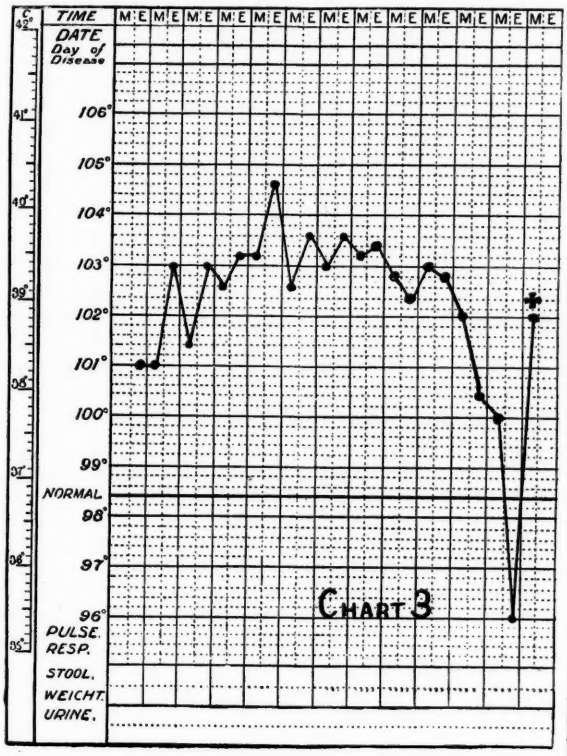
Relapses have been observed, as shown in Chart II.

Clarke, as a result of his large experience, classified the cases under three headings, namely, the restless, the drowsy and the chronic type.

The restless type, comprising about 92 per cent. of all his cases, is characterised by a marked nervous irritability, and restlessness, and occasionally twitching of the muscles, by troublesome nightmares and not infrequently by nocturnal delirium.

In the drowsy type, "the symptoms in general resemble those of the restless type, with the following exceptions: After an initial headache, often of distressing severity for a few hours, practically all symptoms of pain cease. The patient becomes drowsy and depressed, and he loses all interest in

his surroundings. He is easily aroused to take food or medicine, the perspiration is not so profuse as in the restless type. Although the patient in the early stages takes his food well, he loses weight rapidly. The tongue is very dry, and rapidly becomes coated of a deep brown almost black colour. There are frequent marked twitchings of the voluntary muscles. The superficial lymphatic glands are more enlarged than in the restless type of the disease. Nystagmus may develop late in the complaint. During the second week after the onset of the pyrexia, the drowsiness may deepen into coma, and a fatal issue rapidly ensue. A sudden fall to sub-normal, followed by a rapid rise of the temperature to 103° or even higher may take place towards the termination of the disease (see Chart III.).



In general, the appearance of the patient resembles one with typhoid fever, but there is no distension or tenderness of the abdomen. The characteristic typhoid rash does not develop, the spleen is not enlarged, tympanites, perforation and hæmorrhage do not occurr. In 53 cases of the drowsy type, 8 of the patients had previously suffered from typhoid fever.

The chronic type, on the whole, resembles a mild restless type. In these cases, the temperature may rise from a little above normal or even sub-normal in the morning to 99° or 101° in the evening. The lymph glands are only slightly enlarged, a feeling of malaise is well marked. These symptoms may persist for three or more months.

One attack of the disease confers a slight and transient immunity only, and the same person may contract the infection at yearly intervals.

Prognosis.

The prognosis is, generally speaking, very favourable, and Clarke found, amongst 1482 cases, a mortality of less than one per cent.

Diagnosis.

When a case of endemic glandular fever occurs within the endemic area, the diagnosis does not present any difficulties to the experienced; but since this fever resembles in some of its clinical aspects certain other diseases, the differential diagnosis must be discussed.

Many of the cases of dengue occurring in Queensland show a more or less pronounced swelling of the superficial lymph glands, and the rash in dengue fever simulates, in many instances, that of endemic glandular fever. The course of the fever, however, differs. In typical cases of dengue, the pyrexia lasts for five days only, being followed after a remission of about two days by a short relapse, whereas in this fever a fairly high remittent temperature persists, usually for 10 days or more. The pains in the back, the bones and the joints, so well known in dengue, are but little marked. The pulse, rapid in the former and increasing proportionately with the temperature, is only slightly raised in endemic glandular fever. Besides, in dengue, the incubation period is shorter, the onset more rapid, and the convalescence extends over a longer period.

Endemic glandular fever was at one time considered to be bubonic plague. The differential diagnosis should not present any difficulties, since the swollen lymph glands in the latter are not symmetrically distributed, they are painful and tender and are prone to suppurate, though the course of the fever is similar in both.

On the whole, the clinical picture of the majority of cases of endemic glandular fever is not of the same severity as that of bubonic plague, and the anxious facial expression, so typical in the latter, is entirely absent. An isolated case of the fever outside the endemic area might be mistaken for bubonic plague, especially since the first cases of an epidemic are comparatively mild, but a bacteriological examination will decide the diagnosis.

In climatic bubo, a disease which occurs in North Queensland, and might be confused with endemic glandular fever, only the lymph glands of the groin become swollen and painful, and frequently suppurate, and the severe constitutional disturbances are invariably absent.

Endemic glandular fever has been termed, for an unknown reason, filarial fever, though there is no clinical resemblance between the two. In the case of filariasis, the swelling not only involves the lymph glands, but also the surrounding lymphatic tissue, giving rise to an extensive doughy swelling in the affected region.

It may be noted that filarial larvæ were found in less than 25 per cent. of Clarke's cases, and in none of our cases. Moreover, microfilariæ were absent from the blood of several cases who had suffered from the fever a year or more previously.

Etiology.

The etiology of endemic glandular fever is unknown.

A great number of smears of the peripheral blood and of lymph gland juice obtained by gland puncture from patients, stained by Giemsa's stain and by Breinl's wet methods were examined with entirely negative results.

Blood cultures were made from a number of cases on ordinary culture media, including serum, but were entirely negative in every case. The cultures made from the urine of one case showed no growth beyond a few colonies of staphylococcus albus.

Pathology.

The blood of a number of patients was carefully examined, and it was found that the number of red blood corpuscles and the amount of haemoglobin do not undergo any changes during the course of the disease.

The number of white blood corpuscles increases during the first few days, but a pronounced leucocytosis was not observed in any of our cases. The differential count showed an increase in the percentage of lymphocytes only. (See table I.)

TABLE I.

Date of Disease.	R.B.C.	W.B.C.	Differential Count.				
			Polymorphs Neutrophiles	Transitionals	Lymphocytes	Eosinophiles	Large Monocular.
Case W.							
2nd ..	4,630,400	6,900	71.8%	0.6%	25.6%	—	2%
7th ..	—	12,300	55.2%	0.4%	43%	—	1.4%
Case M.							
About 7th day	4,876,800	9,200	77.2%	1.0%	19%	—	2.8%
12th ..	—	11,766	53.4%	0.4%	44.6%	0.2%	1.4%

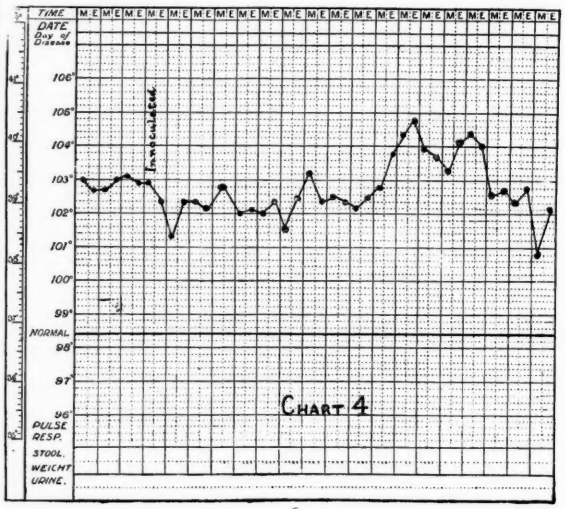
Histology of Lymph Glands.—Lymph glands from the groin and neck of one of the fever cases were extirpated. On cross section they appeared hyperæmic, of light pinkish colour, soft and œdematous. There were no necrotic areas noticeable.

The histological examination of sections stained by various methods showed the typical picture of an acute lymphadenitis. There was œdema and small celled infiltration in the periglandular tissue. The blood vessels of the lymph glands were distended, and free red blood corpuscles were scattered in between the glandular tissue. The lymphoid tissue was permeated by distended lymph spaces, containing a few blood corpuscles and endothelial cells, some of them in varying stages of degeneration, the chromatin showing fragmentation. Many of the endothelial cells contained cell debris; no necrotic areas were seen.

Animal Experiments.

Two monkeys (one Macacus rhesus and one Cercopithecus (?)) and one guinea pig, were injected with about 10 c.cm. of the peripheral blood of two patients, who showed well developed symptoms of endemic glandular fever. In these monkeys a definite rise in temperature was observed on the 9th and 10th day respectively, after inoculation (see Chart IV.).

Since the temperature of both monkeys rose after the same interval it is evident that the fever was due to an infection from the blood of the patient. The body temperature previous to inoculation was fairly constant, and fell, in one case five days, in the other four days after the onset of the pyrexia to



the normal; two control monkeys kept under the same conditions did not show any rise in temperature. The conclusion is therefore justified that the inoculation of blood from cases of endemic glandular fever into monkeys had given rise to a pyrexia, due to the causal agent of endemic glandular fever.

The lymph glands of the infected monkeys became slightly enlarged at the time of the onset of the pyrexia.

The guinea-pigs did not react to the inoculation in any definite way.

Epidemiology.

Persons of both sexes and of all ages are susceptible to endemic glandular fever. A racial immunity does not exist; Australian aborigines, natives of the Pacific Islands, and Asiatics are known to have contracted the disease. It seems that the old inhabitants of endemic districts contract the fever as well as newcomers, perhaps in a milder degree. A comparison of the number of cases of this fever which underwent treatment at the Port Douglas Hospital during the last few years, with the average maximum and minimum temperatures, and the monthly rainfall, makes it apparent that the air temperature, as such, and the amount of rainfall do not influence its incidence, and that there is no marked seasonal variation noticeable.

It is interesting to note that the number of cases admitted per month before April, 1911, was much higher than in the succeeding years (see table 2).

At the end of March, 1911, the district was visited by a cyclone, followed by a very heavy flood. The figures seem to indicate that there may be a causal connection between the ocurrence of the flood and the diminution in the number of cases.

The hospital records prove further that the incidence of the fever is not evenly distributed over the district, but that the greatest number of cases had come from certain well-defined localities, as a rule situated near to dense scrub country, although sporadic cases occurred throughout the whole district.

TABLE II.

Number of Cases of Endemic Glandular Fever admitted to the Port Douglas Hospital.

Month.	1908	1909	1910	1911	1912	1913	1914
January	—	5	11	15	4	4	2
February	—	8	20	15	8	6	6
March	—	9	15	20	9	6	5
April	—	9	12	5	1	4	4
May	—	7	18	3	5	8	8
June	18	5	13	2	6	10	4
July	21	15	25	4	4	12	6
August	25	31	21	4	9	6	—
September	24	38	10	—	2	12	—
October	17	21	17	1	7	3	—
November	3	2	14	8	9	4	—
December	1	2	12	7	5	3	—
Total	109	152	188	84	69	78	35

It was pointed out to us that farm hands employed in the cane fields, and farmers who were compelled to do manual work in the field, were more prone to contract the disease than supervising farmers, and that the number of women and children admitted to the hospital suffering from the fever formed a small percentage only of the total number of cases. During the six years for which records were obtainable only 43 women were admitted out of a total of 715 cases.

Since cases of endemic glandular fever have been observed in districts where no sugar cane is cultivated, it is clear that the incidence of the disease does not depend solely upon local conditions brought about by the cultivation of sugar cane. All cases observed in other localities were, however, men who had spent some time previously in the dense scrub.

Nothing definite is known about the ways and means by which the disease spreads. There is no doubt that it cannot be considered a contageous disease, since no case has ever originated amongst the staff of the Port Douglas Hospital, and no inpatient of this institution has contracted the disease whilst in the hospital, although no special precautions are taken to prevent the possible spread.

Water and food as sources of the infection can be eliminated by the consideration of the localized distribution. The local occurrence and spread of the fever, the incidence of the infection in proximity to scrub country, and, furthermore, the fact that it is mostly cane cutters and field workers sleeping in camps, situated in sheltered places near water, who contract the fever, whilst the greater number of supervising farmers, who spend only the day or part of the day in the field, escape infection, indicates that endemic glandular fever is, in analogy with dengue, malaria, etc., an insect transmitted disease.

During our short stay, extending over four weeks only, biting insects were collected from infected localities. Of those, biting flies as Tabanids, etc., do not make their presence felt in numbers throughout the whole year, and are plentiful during the summer months only. As sandflies show a sporadic distribution, and were not found in localities where fever was said to be prevalent, and as bed bugs and lice are seemingly of rare occurrence, mosquitoes are in all probability the most likely insect carrier. They are, as far as we could ascertain, the only biting insects attacking men present throughout the whole year and of general distribution. The collection made during our short stay only comprised the following insects:—

Culex fatigans, Stegomyia fasciata, Nyssorhynchus annulipes, Myssorhynchus bancrofti, Culex vigilax, Culex sitiens, and two new species not yet determined.

Of these only the two latter species are peculiar to the district.

In analogy to plague it is possible that native animals of infected districts may be connected with the spread of the disease.

The only wild animals of general distribution in the district are rats, which are at times very numerous in the cane fields. Unfortunately, no specimens could be obtained for examination.

Conclusions.

1. Endemic glandular fever is a specific disease occurring in the Mossman district of North Queensland, characterized by a high remittent temperature of about 10 days duration, enlargement of certain groups of the superficial lymph glands and the appearance of a rash.
2. The etiology of the fever is unknown, no parasites were discovered in the peripheral blood and gland juice, and cultural examination of blood and urine gave negative results.
3. Histological examination of enlarged lymph glands showed the typical picture of lymphadenitis.
4. Two monkeys were successfully infected by means of blood inoculation from two patients.
5. Epidemic glandular fever is in all probability an insect transmitted disease.

DYSMENORRHOEA.

By **J. A. G. Hamilton, M.B., B.A.**

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It is not my intention in this short paper to enter into a wide discussion on the classification, etiology, causes, symptoms and treatment of this somewhat common and ambiguous disorder. Any of us who have been in practice for a number of years must notice that painful menstruation in young girls, especially amongst the leisured classes, and amongst shop and factory girls, and others whose hygienic

(Read at the Australian Medical Congress, Auckland.)

surroundings are not of the best, is decidedly on the increase, while in my experience dysmenorrhœa is comparatively rare amongst farmers' daughters and amongst those who are either able or willing to lead a healthy outdoor life.

Dysmenorrhœa except in cases of congenital uterine malformation rarely appears in the first six or twelve months of menstrual life; when the pain appears it is an indication of some lack of balance in the development of the menstrual organs, due to want of proper attention to hygienic rules at the most critical period of a young girl's life, and is, in my opinion, very frequently a derivative effect of the highly specialized education of girls at the present day. The question is whether we are not over-educating our girls to the extent that we are interfering with their general health, their menstrual function in particular, and their chances of being good mothers. An improper mode of life, irregular hours for rest and food, insufficient exercise, lack of fresh air and sun, resulting in a poor development, predispose the woman, as the man, to a variety of pathological conditions, but as the reproduction apparatus is more delicately organised in women, it suffers especially as the result of any general systemic derangement. Neglect during menstruation especially in young girls is a frequent cause of subsequent trouble. The effect of menstruation on the whole system is remarkable. The nervous, vascular and digestive systems all share in the menstrual functions. The usual work of the girl at school or at any employment should be altered to suit the altered conditions at that period. Parents and guardians should be taught that a girl at puberty requires special care, and if she is called upon to compete with the other sex in mental and physical work, this can only be done, in the majority of cases, at the expense of her sexual development. Dysmenorrhœa is much more common than it was when I commenced practice, and I am driven to the conclusion that the present mode of life, the demands of society, and the higher education of girls is the cause. In discussing this question I will confine my remarks to dysmenorrhœa in virgins, for in them pelvic examination and local treatment is difficult to carry out, and only undertaken when absolutely necessary, whilst in married women local examination and treatment can be undertaken, and we have always the hope that pregnancy will cure the condition, except when caused by adnexal trouble or pelvic inflammation.

All women even in good health have some discomfort at the menstrual period. This is easily understood when the nature of the function of menstruation is considered. The various changes, especially the congestion which occurs during the normal process of menstruation, must give rise to a certain amount of pelvic and general discomfort. The sensitiveness of the nervous system in woman varies so much that what is described as "discomfort" is in others a "pain," whilst many describe their sufferings as "agonizing," but the difficulty arises in estimating fairly the suffering of the individual, and in determining when the disorder has ceased to be physiological and become pathological. There is no doubt, however, that a large number of girls demand our attention and treatment for menstrual suffering; the pain is not merely a temporary one of a few hours, but a prolonged one seriously interfering with their work, or social enjoyments; in some cases no sooner has the pain of one epoch passed, than she begins to look forward with dread to the next, interfering to a great extent with her health and happiness. Further than that, dysmenorrhœa brings in its train many mental and nervous derangements; many of these neuroses are no doubt due to changes in the ovaries, and must be carefully considered in dealing with dysmenorrhœa. Ovarian secretion is a subject causing a good deal of discussion at present., and there is probably much to be learnt about the relation of ovarian secretion to dysmenorrhœa. It is likely that hypersecretions of the ovary produce an excessive stimulation of the uterus; this may account for the excessive bleeding, clotting and severe contractions in some cases of dysmenorrhœa.

The Varieties of Dysmenorrhœa.—The classifications given by different writers are endless; possibly the lack of any anatomic reason and the futility of all means of relief in many cases accounts for this. Dysmenorrhœa is sometimes met with when no palpable lesions can be found. It is generally spoken of as idiopathic or neuralgic. No doubt purely nervous cases are occasionally met with. The condition may be due to a faulty innervation of the uterus, be it an anatomical or functional defect.

For the sake of convenience I will discuss dysmenorrhea under two headings:—

1. Dysmenorrhœa due to congenital defects.
2. Dysmenorrhœa due to acquired lesions of the uterus, tubes, ovaries or other organs.

Dysmenorrhœa due to Congenital Defects.—In this class of case, the uterine dysmenorrhœa is associated with defective development; the uterus after puberty in such cases continues in a more or less infantile condition. Byford suggests that these uteri should be called "puerile" rather than "infantile," because a true infantile uterus does not menstruate, but in a "puerile" uterus the function has been established, so that they can menstruate. The body and cervix may be "puerile," and the want of development may affect both the body and cervix. The corpus is often acutely ante-flexed, and the cervix long, tapering, and narrow. The malformation affects the cervical canal more or less, causing it to be either sharply kinked or the seat of a pronounced stenosis. Under this class of cases we may include dysmenorrhœa caused by a pathological anteflexion of the uterus. This position is really a defect of development, since in many cases the uterus is bent nearly double on itself, and the body and cervix both point in the direction of the pelvic outlet. The cause of anteflexion is probably a poorly developed flaccid corpus being forced down

on the cervix by intra-abdominal pressure. This flexion is often accompanied by a stenosis of the os, which has given rise to the term "obstructive" or "mechanical" dysmenorrhœa, but this mechanical obstruction ere long causes a secondary congestion. The purely mechanical theory of dysmenorrhœa was originally taught by Simpson and Sims, but is now almost universally rejected. It is now believed that the pain is to a great extent due to irritation from congestion; the abnormal vascular tension, the result of interference with the circulation in the vessels at the point of flexion, irritates the nerves of the uterus and causes the pain.

Dysmenorrhœa due to acquired lesons may be a symptom of almost any pelvic disease, retro-displacements of the uterus, fibroid tumours, endometritis, pelvic inflammation, ovarian disease, etc. The dysmenorrhœa of retro-displacements is due to the altered position, plus an associated endometritis, or to the pressure of the uterus on the ovaries; the dysmenorrhœa of fibroid tumour is caused by the painful contractions of the uterus produced by the irritation of the fibroid; ovarian dysmenorrhœa frequently results from a thickening of the ovarian capsule, whilst in tubal disease the pelvic engorgement always present at the menstrual period adds to the congestion of an already inflamed tube or tubes. As a rule the pain is characteristic, and helps the diagnosis as to whether the dysmenorrhœa is of the obstructive type or caused by some acquired lesions. In obstructive dysmenorrhœa the pain comes on before the flow, and is relieved when the flow has become well established, while in the acquired form the pain comes on either with or before the flow, and is more or less constant during the period, and is not of that labour-like pain of obstruction.

Treatment.—It is important to remember on the question of treatment that dysmenorrhœa is very often a local manifestation of a general condition; a great many of these cases will improve with general treatment, change of habits and change of location.

The treatment is palliative and mechanical.

Palliative treatment consists in dealing with all general conditions such as anæmia, etc. In treatment of the actual pain, pelvic depletion is called for; anything that depletes the pelvis diminishes the hyperæmia upon which the pain depends. Rest in bed, hot sitz-baths, the free use of saline aperients before the flow are of the utmost value; drugs in the shape of aspirin, phenacetine, antipyrine, bromide of potassium will be of service. Undoubtedly opium and alcohol give the most prompt and efficient relief, but they are to be employed with the utmost caution, as their temporary employment may become a permanent habit; many cases of the morphia or alcoholic habit in women might be traced to commencing them for the relief of painful menstruation.

Mechanical treatment.—For dysmenorrhœa which is due to an obstruction of the cervical canal, associated with an anteflexion of the cervix or of the corpus, and the accompanying congestion, dilitation is the procedure of choice. If the obstruction is the sole cause of the menstrual pain the patient should be cured by operation. There are several alternative means of doing this. My practice is under an anæsthetic, and with the fullest aseptic precautions to dilate the cervix, which is fixed with a vulsellum on each lip, fully with Hegars' dilators. In many of these cases dilatation is difficult, and when I reach about No. 8 Hegar I requently find that it will not dilate further, so instead of using forcible dilatation with Goodell's dilator, I pack the cervix with a strip of gauze. This has a softening effect on the rigid cervix, and in 24 hours it will dilate fully. After dilatation the uterus is curetted, and swabbed out with some mild chemical such as tinct. iodi., to clean out the interior. The entire uterus is then packed from the bottom with iodoform gauze, or some equivalent, with plenty of antiseptic in to keep it sweet, particular pains being taken to pack widely through the cervical canal. I leave this gauze for three days if there are no contra-indications, renewing it every three days for a week or two. The gauze straightens out the cervix, and acting as a foreign body, causes the uterus to contract, and this stimulates development. In a few selected cases I have had good results from the use of a stem pessary. I know there is a prejudice on the part of those of us who practised gynaecology in the antiseptic days, or the earlier days of asepsis, against the stem pessary. It was formerly used frequently and led to serious pelvic inflammation in many cases, and for a time its use was practically abandoned, but in selected cases it has in my opinion its place, and can be used with comparatively little risk, provided it is used with strict aseptic precautions, and never in infected cases. The metal spiral spring pessary I use is hollow in the centre, and allows of free drainage. Being flexible, it does not cause pressure symptoms where its end comes in contact with the endometrium. After its insertion the patient is kept in bed for eight or ten days. As a rule there is a little pain for the first few days, but this soon subsides. In many cases there is no pain. If the pain is severe the pessary is removed, and if necessary a larger one can be substituted after a week or two. I have tried leaving the stem pessary in during the next period, but found on one occasion that the menstrual fluid caked in the hollow of the pessary and blocked it, so I have not left one in during a period since. I noted in this case that the patient complained of just as much pain during the period when the stem pessary was in situ as before; this caking of the menstrual flow may possibly have been the cause. I have tried leaving an Outerbridge drain in the cervix for one or two periods, but have seen the menstrual pain just as severe with the drain in situ. This is a strong point against the purely obstructive theory.

In case of a poorly developed uterus causing rysmenorrhœa, the logical treatment consists in using remedies to produce development; the stem pessary does this. The patient should be kept under

observation for some time, and if necessary the pessary should be re-inserted after two or three months.

Within the last two or three years I have used a special stem pessary for a number of young girls suffering from dysmenorrhœa, and I have never seen any bad results follow its use. In many cases the result was eminently satisfactory; in others the pain returned after a few months as severely as before. If the obstruction is the sole cause of pain this or some other form of dilatation will cure it. This is not true if the dysmennorrhœa is of the neurotic or neuralgic type. Dilatation by means of tents is transient in its results, and has been followed by frequent and serious warnings in the shape of pelvic inflammation. Incision of the cervix as introduced by Simpson used to be a very common treatment some years ago. A deep incision was made in the posterior wall, and sometimes in one or both lateral walls, and allowed to heal by granulation. I have seen alarming hæmorrhage from this operation, and one can easily imagine the scar of these incisions becoming the seat of malignant disease in later life. Cancer generally commences in a seat of traumatism, as presenting a focus of irritation, and a point of lessened resistance. For this reason I think incisions of the cervix which are allowed to heal by granulation are to be avoided. I have never seen cancer commence in the vaginal portion of the cervix, except where there had been some traumatism, either the result of labour or instrumental interference.

In cases of "infantile" or "puerile" uterus with anteflexion, you not only have the anteflexion but some retroflexion. The condition is aggravated by the uterus settling back. Some of these cases will be relieved by shortening the round ligaments and shortening the cervix, where there is marked elongation of the cervix. The elongation can be overcome by amputation of the cervix, or by Dudley's operation; the latter operation has given me good results where it was most marked in the posterior wall of the cervix. The posterior lip of the cervix is divided in the middle line up to the vaginal attachment, the cut surfaces are held apart, and deepened by means of a scalpel, then a small wedge is cut out on each side. The cut surface is folded on itself by a single silkworm gut suture, thus bringing the external os back to the angle of incision. The cervix will then point backward in the normal position towards the hollow of the sacrum instead of forward towards the vaginal outlet.

In dysmenorrhœa due to acquired lesions the lesion, whatever it may be, has to be treated, and the dysmenorrhœa should be treated only in conjunction with, and as a part of, the disease. In "ovarian dysmenorrhœa," if there are any gross lesions of the ovaries the latter will probably have to be removed, but oophorectomy for dysmenorrhœa in the absence of gross lesions has frequently substituted one form of neuralgia for another, and in young women has added the discomfort and train of symptoms attendant on the artificial menopause to her other troubles.

There is an acquired lesion which, in my opinion, is not an infrequent cause of dysmenorrhœa. I refer to an "inflamed appendix." In some women the appendix is long, and hangs down into the pelvis, taking part from its proximity in the pelvic congestion which accompanies normal menstruation. This congestion of the appendix is increased at each period, and eventually becomes permanent, and gives rise to severe pain, resembling interuterine dysmenorrhœa. The condition can be recognized by a well-marked tenderness over the region of the appendix, which is generally increased at each period. I have completely relieved persistent dysmenorrhœa by removal of the appendix in several cases.

Unfortunately there are a certain number of cases of dysmenorrhœa which resist all forms of treatment, and the victims become physical and mental wrecks, unless the trouble is relieved by matrimony and pregnancy. The initial difficulty in discussing dysmenorrhœa lies in our want of a complete knowledge of the ordinary physiology of menstruation. In cases of dysmenorrhœa associated with sterility, the explanation of both conditions is to be sought for rather in general congestion of the pelvic organs, more especially of the endometrium, than in any mechanical cause. The purely obstructive theory of sterility scarcely appears to me to have any foundation, for as Jackson puts it, "The obstacles which are overcome by spermatozoa in their progress towards the uterine cavity are, to say the least, remarkable."

Dysmenorrhœa is probably due to congestion of the uterus, associated with spasm of the os, whilst sterility is due to the hyperæmic conditions of the endometrium. It is certain that the cure of an anteflexion or a retro-flexion, or in other words the removal of causes apparently mechanical, has resulted in the cure of dysmenorrhœa, and is sometimes followed by pregnancy, but on the other hand these mechanical means, while relieving the dysmenorrhœa, have often failed to remove the sterility, failed because they did not remove some conditions other than the narrowing of the cervical canal. Such a conditions seems to me to be a hyperæmic state of the endometrium, which is inimical to the grafting of the ovule. So no matter how we discuss the varieties of menstrual pain, no matter what the exact origin of the pain may be, the essence of dysmenorrhœa seems to me to be congestion.

Reports of Cases.

HAEMORRHAGE INTO THE SPINAL CORD.

By **E. W. Buckley, M.B. (Melb.),**
Tamworth.

Before describing the clinical history of my case of hæmorrhage into the spinal cord, I think a reference to the anatomy and physiology of the spinal cord will not be amis

In a cross section of the spinal cord we have the following columns well mapped out:—

1. Crossed Pyramidal Tract } Descending Motor Tract.
2. Direct Pyramidal Tract. }
3. Posterior Internal Tract
4. Posterior External Tract. } Ascending Tracts.
5. Direct Cerebellar Tract
6. Ventral Cerebellar Tract }

7. In the lateral column of the cord are nerve fibres which conduct the sense of pain and temperature to the brain; the sense of pain and temperature are conducted along the posterior nerve roots, and these enter the spinal cord and end around cells in the grey matter of the posterior horn, and these cells give off nerve fibres, which cross over to the opposite side of the cord on the anterior commissure, and ascend in the lateral columns. Thus the lateral columns conduct not only pyramidal motor impulses coming down, but also spino-thalamic ascending impulses of touch, temperature and pain.

J. M., aged 36 years, married, native of New South Wales, was seen on April 2, 1914. He was thrown from his trap about 7.30 p.m. on the previous day, and was dragged for some distance. He was unconscious for a short time, and regaining consciousness he found that he was paralysed in both legs. About midnight he was able to move his left leg. When seen at noon of the 24th he was complaining of great pain in the back of the neck and between the shoulders. On examination his right leg was paralysed, but he could move his left leg without difficulty. He had retention of urine; 1½ pints were drawn off by catheter. The urine was normal. He could not sit up or raise his head, but he was able to nod the head, and also to rotate it, but the movements were limited. The knee jerks were absent on the right side, but present on the left side (normal). Sensation of pain was interfered with on the left side. He could not tell which end of the pin was being used, but in the right leg he could distinguish easily between the sharp and the blunt end. On tracing this altered sensation up the body, I found that up to the second intercostal space sensation to pain was interfered with on the left side, and normal on the right side. From above, and including the second intercostal space the sense of pain was the same on both sides. When tested in accord to heat sensation, on the left side he could not distinguish hot from cold, whereas on the right side he could. This was noticeable as high up as the second intercostal space. Above this the temperature sense was quite normal. He could move his right arm more freely than his left, but there was not much movement in his left arm. He complained of pain shooting down both arms down to his fingers, showing that there was some irritation of his posterior nerve roots. Sensation to pain was dulled on both arms, although on the posterior aspect of the left arm his sensation to pain was not altered. The pupils were equal, and both reacted to light and accommodation. There were no girdle pains. No depression or fracture of the spine could be made out on examination. There must have been some fracture, as, after three weeks, a certain amount of thickening of the spine could be detected (callus).

On April 26 a slight knee jerk was present in his right leg. The right pupil was smaller than the left. He could feel the sensation of pain a little better in his left leg.

On the following day the pupils were equal; pressure on both sides of neck at the level of the 6th and 7th cervical vertebrae caused a "jump" at left knee.

On April 29 he could move his right arm a little better, but had a lot of pain shooting down both arms over external condyles. The pain was worse at night.

On the 30th he passed urine voluntarily for the first time. Three days later a sharp movement of right leg was obtained by tickling the sole of right foot.

His condition remained about the same until 10.5.14, when he said that his right leg "jumped a lot."

On the 12th, ankle clonus was present, and the knee jerks were greatly increased in the right leg and also in the left leg. On the 15th, I asked him if he could move his right leg. He said "No." I then asked him to try, and he got a great surprise when he found he was able to move it. His temperature was slightly raised for 17 days. From this date he gradually improved, and after keeping him in bed for six weeks, he was allowed to get up. After being up for a few days he was able to walk, but had difficulty in maintaining his equilibrium. His walking improved gradually, and he could get about easily with a stick, but there was a little dragging of his right foot, and he could not raise his right arm above his head, and there was wasting of his supra-and infra-spinatus muscles, showing that the nerve cells, or nerve fibres which supply these muscles, had been damaged.

About the middle of July it was found that the right infra and supra spinatus muscles were much wasted. The left knee jerk was normal, but right knee jerk was still greatly exaggerated. Ankle clonus was present on the right side.

I saw the patient in August, and found that he was able to walk without difficulty, and could raise both legs easily. He had some contraction of the fingers of the right hand, and also loss of power in his grip. He still complained of pain shooting down to his little ring fingers on both hands.

This, gentlemen, is the history of a very interesting case, and also a rare one. In coming to a correct diagnosis, we must exclude compression of the cord, because in a case of compression operation holds out the only hope for a cure. In a case of hæmorrhage operation is contra-indicated. Osler states that the most common cause of hæmorrhage is traumatism. Cases have been known to follow cold or exposure. A direct injury to the spine is the most common cause.

Thorburn states that acute flexion of the neck often without attendant fracture and dislocation of the vertebræ is a form of accident that most commonly precedes these hæmorrhages. The level of the region for this reason is most frequently in the lower cervical region. One side of the cord is usually more involved than the other.

In regard to the site of the hæmorrhage, Osler says the bleeding primarily takes place in the grey matter. In this case the hæmorrhage occurred between the 6th and 7th cervical segments, because there was wasting of the infra- and supra-spinature muscles, and their nerve supply comes from this portion of the cord, and also because alteration to sensation of pain and heat was felt only below the 2nd intercostal space, which is supplied by second costal nerve, which derives its origin about the sixth cervical segment of the cord. The hæmorrhage was situated in the lateral column of the right side of the cord between the 6th and 7th cervical segments of the cord, because a unilateral lesion of the spinal cord in this region will produce a motor paralysis below the distribution of the 2nd costal nerve, and anæsthesia of the opposite side of the body. If this had been a case of compression of the spinal cord we would have had the same symptoms on both sides of the body, namely, paraplegia and loss of sensation below the lesion.

HAEMORRHAGE INTO A PANCREATIC CYST OPERATION, RECOVERY.

By **S. P. Croom, M.B., B.S. (Melb.),**

Melbourne.

J. P., a male, aged 64 years, was sent to me by a country doctor with the following history:—A fortnight ago the patient had been seized with acute abdominal pain and vomiting. The pain had been confined to the epigastric region, and had been so severe that morphia had been administered for its relief. He had been in a very collapsed state after his attack, and had been kept in bed for 10 days, during which time he had several further attacks of the same character, but not so severe. He had not had any previous serious illnesses, but for many years had suffered from indigestion with periodic "bilious attacks." He had never experienced acute pain after food, but had for many years been troubled with flatulence. His bowels had always been fairly regular. He had noticed that his motions were greasy looking, and had a most offensive odour. He had not noticed any tumour in the abdomen until after his severe attack of pain a fortnight ago. He had lost a good deal of weight during the last year.

On examination I found the patient jaundiced and rather wasted. The heart and lungs were normal. The abdomen was distended, and a large tumour was palpable in the

right hypochondrium. This tumour was movable, and the hand could be insinuated between it and the lower edge of the liver. It did not move with respiration. Inflation of the stomach did not displace it to the right. The liver extended to two finger's breadth below the right costal margin, and an enlarged gall bladder could be definitely palpated lying above and to the left of the tumour. The urine was free from albumen, sugar and pus, and the blood picture was normal. I advised an exploratory operation. The patient was taken into hospital on November 10, 1913, and two days later I made an exploratory incision over the most prominent part of the tumour. On opening the peritoneum a large tumour presented below the hepatic flexure of the colon. It was tense and cystic. There was well marked fat necrosis. The gall bladder was very distended. A small incision was made through the cyst wall, and the contents were found to consist of old blood clot and a large amount of blood-stained fluid. The incision was enlarged, and the blood clot removed. The hand could then be passed up to the head of the pancreas. Some troublesome hæmorrhage took place at this stage, which made it necessary to pack the cyst with gauze and close the abdomen, leaving a large rubber drainage tube insitu. When the contents of the cyst had been evacuated it was easy to empty the gall bladder by manipulation. There were no gall stones in the bladder or ducts. The patient was very well the day after his operation. There was a little oozing from the wound and some abdominal distension. Fair progress was made during the first seven days, temperature varying from 98° to 99.4°, and the pulse from 80 to 84. The gauze packing was partially removed on the sixth day, and the wound irrigated owing to the somewhat offensive nature of the free discharge, which appeared to be composed of broken-down blood clot and pancreatic fluid. On the eighth day there was a severe hæmorrhage at 11 a.m., and another at 5 p.m. The patient vomited large amounts of yellowish fæcal smelling material at frequent intervals, and became very collapsed, the temperature being 96.4° and the pulse 140 per minute, and of very poor quality. He was given continuous saline injection, and morphia hypodermically. The case looked very hopeless at this stage, but at 4 a.m. there was a slight improvement in the condition of the patient; the pulse was better, and the vomiting became less frequent. He retained two pints of saline during the night, and was decidedly better the next morning. Previous to this calcium lactate had been given in large doses. I then supplemented this treatment with subcutaneous injections of normal horse serum. As the cyst had again become filled with blood clot, I waited five days, during which time the condition of the patient improved steadily, and then made a small opening into the sac, and removed old gauze plugs and blood clot, leaving a large rubber drainage tube in the wound. There was no fresh hæmorrhage at this operation. There were several slight hæmorrhages during the next fortnight, usually accompanied by intestinal vomiting. The cyst drained freely, and the temperature and pulse remained normal. The patient was discharged from hospital on January 2, 1914. He was very emaciated and weak, but during the next six weeks of convalescence he improved steadily, and by the end of February the cyst had completely closed, and he was able to take short walks. His weight was then 8 stone. He spent the next few months in the country, improving steadily. He is now in splendid condition, and weighs over 12 stone. All his dyspeptic symptoms and the icteroid tinge he had had for many years have completely disappeared.

Naval and Military News.

The following appointments have been announced in the "Commonwealth Gazette," under date of October 17, 1914:—

1st Military District.

Australian Army Medical Corps—

Major D. G. Croll, to be Principal Medical Officer (temporarily), vice Lieutenant-Colonel A. Sutton, seconded from the appointment for duty with the Australian Imperial Expeditionary Force.

Australian Army Medical Corps Reserve—

Patrick Charles Higgins to be Honorary Captain.

Captain F. L. Bignell is transferred to the Australian Army Medical Corps, with seniority as from date of transfer.

2nd Military District.

Australian Army Medical Corps—

Fergus McIntyre to be Captain (provisionally and temporarily).

3rd Military District.

Australian Army Medical Corps—

Lieutenant-Colonel G. Cuscaden, V.D., to be Principal Medical Officer (temporarily), vice Colonel C. S. Ryan, V.D., seconded from the appointment for duty with the Australian Imperial Expeditionary Force.

Australian Army Medical Corps Reserve—

George Henry Skinner to be Honorary Captain.

William Sloss to be Honorary Captain.

David Evans to be Honorary Lieutenant.

Captain J. K. Adey is transferred to the Australian Army Medical Corps, with seniority as from date of transfer.

4th Military District.

Australian Army Medical Corps—

Captain F. St. J. Poole is transferred to the Australian Army Medical Corps Reserve.

Australian Army Medical Corps Reserve—

Walter John Westcott Close and John Wellesley Flood to be Honorary Captains.

5th Military District.

Australian Army Medical Corps—

Cyril Howard Shearman to be Captain (provisionally).

Australian Army Medical Corps Reserve—

Captain A. H. Gibson is transferred to the Australian Army Medical Corps, with seniority as from date of transfer.

6th Military District.

Australian Army Medical Corps Reserve—

Leonard Clarke Webster to be Honorary Captain.

Army Medical Corps.

To be Lieutenant-Colonels—

Lieutenant-Colonel W. R. Smith, Australian Army Medical Corps.

Lieutenant-Colonel W. W. Giblin, Australian Army Medical Corps.

Lieutenant-Colonel the Hon. J. L. Beeston, V.D., Australian Army Medical Corps.

Lieutenant-Colonel A. T. White, V.D., Australian Army Medical Corps.

Lieutenant-Colonel H. W. Bryant, V.D., Australian Army Medical Corps.

Lieutenant-Colonel T. M. Martin, Australian Army Medical Corps Reserve.

Major R. M. Downes, Australian Army Medical Corps.

To be Major—

Major R. Macdonald, Australian Army Medical Corps.

To be Captains—

Captain J. F. G. Luther, Australian Army Medical Corps.

Captain J. E. Dods, Nnattached List.

Captain E. R. White, Australian A.M.C.

Captain H. J. Clayton, Australian A.M.C.

Captain A. L. Dawson, A.M.C.

Captain J. P. Kenny, Australian A.M.C.

Captain C. Shellshear, Australian A.M.C.

Captain R. S. McGregor, Australian A.M.C.

Captain J. H. Anderson, Australian A.M.C.

Captain H. L. St. V. Welch, Australian A.M.C.

Captain L. W. Jeffries, Australian A.M.C.

Honorary Captain M. W. Cave, Australian Army Medical Reserve.

Cuthbert Arnold Verge.

Army Medical Corps.

To be Major—

Major G. W. Barber, Australian Army Medical Corps.

To be Captains—

Captain J. A. O'Brien, Australian Army Medical Corps.

Dr. Gerald Eugene MacDonald Stuart.

Medical Journal of Australia.

SATURDAY, OCTOBER 24, 1914.

The Incidence of Infective Diseases among School Children.

The Department of Public Instruction of New South Wales announces a report on the incidence of infective diseases among school children, and pending the publication of this report, has circulated a short notice, entitled "Infectious and Contagious Diseases, and their Effect on School Attendance." The work of calculating the number of school days lost by the exclusion from school of contacts would appear to be considerable, but in view of the importance of the subject it is to be hoped that the information will be available within a short time.

In the notice referred to, it is made clear that the Medical Branch of the Department aims at the eradication of "infectious and contagious" diseases from schools by the isolation of those affected and of those who have come into contact with the patients during the incubation period or the actual attack. During the year 1913, 8.1 per cent. of the children at the primary schools were attacked by an infective disease, "necessitating compulsory exclusion from attendance." The list of diseases in this category includes pertussis, morbilli, varicella, diphtheria, tinea trichophytina, scarlatina, enteric fever, parotitis, variola and ophthalmia. No details are given in regard to the authority for the diagnosis. It is stated that of the 18,923 affected children, 8,454 were suffering from pertussis, 2,927 from varicella, 2,461 from morbilli, and 1,942 from diphtheria. There were 89 cases of variola in the Metropolitan District Schools. In addition, 259 children were affected with enteric fever, and 693 with scarlatina. Lastly, there were 934 cases of ophthalmia, practically all of which occurred in the country districts.

The notice goes on to relate that the average period of absence on account of enteric fever was 8.2 weeks, while it was 7.7 weeks on account of small-pox, and 7 weeks on account of diphtheria. The average period of absence for all children affected by infective diseases of the nature stated was 5.2 weeks. The concluding paragraph lays stress on the importance of this period of absence; but no mention is made of the immediate or remote effect of the infections either on the majority of the little patients or on selected individuals. The information given, we presume, is merely an introduction of what is to follow.

In regard to the diseases selected as necessitating exclusion, it may be pointed out that from an epidemiological point of view, measles, scarlet fever chicken-pox, small-pox, and diphtheria, might be grouped together, although very different methods must be adopted to check their spread. In regard to an outbreak of small-pox, vaccination of all the children in the school who have not been successfully vaccinated within three years should suffice. In the absence of a prophylactic injection of antitoxin, the comrades of a child taken ill with diphtheria should be watched for the first signs of sore throat, and then given an injection without awaiting the result of the bacteriological examination of the faucial mucus. In this manner, contacts in the case of variola and diphtheria need not be removed from the school, and, indeed, it is doubtful whether any gain would be effected if such a course were adopted. The problem is different when the disease is varicella, morbilli or scarlatina. All three are undoubtedly highly contagious, that is direct contact with a patient in the late incubation period or during the acute attack will lead to infection in a large proportion of cases. If the little patients are isolated immediately on the appearance of illness, before the rash appears, the chances of infection following contact with a person who has been in contact with the patient, that is indirect contagion, is small in the case of varicella, and is probably not great in the other two instances. Precaution can be taken without much difficulty in this respect, and the risk of spread by these means can be practically eliminated. It must always be borne in mind that the clothes worn by children during the incubation period of morbilli and scarlatina are a source of grave danger. There is distinct evidence of infection having been carried by such clothes after they had been stored in a cupboard

for some months in the case of scarlet fever. On the other hand, no acceptable evidence has yet been adduced that the desquamated epidermis in this disease is capable of spreading the infection. E. W. Goodall has shown that such a means of spreading infection in scarlatina is extremely doubtful and that the most reliable sign of persisting infectivity is to be sought in redness of the fauces. One difficulty arises in regard to measles. The possibility of infection is present at a very early stage in the incubation period, before the disease is suspected. It would, therefore, be highly desirable if the Medical Branch of the Department were to include coryza in the list of diseases necessitating exclusion from school. This would no doubt materially increase the average number of days of absence per scholar, but it would at the same time act powerfully in the reduction of the incidence of the disease, provided that the exclusion meant real isolation of the patient, and not a holiday. The next question to be determined is, Who is a contact in the case of measles, scarlatina, or varicella? In the case of varicella, it would be sufficient if the whole class which the patient attended at the time of the onset were regarded as suspects. In addition, any children known to have been playing with the child or to have been in other close communion with it, must, of course, be kept under observation. In the case of measles and scarlet fever the definition of contact is not so easy, for it is probable that children coming into contact with the patient during the incubation period may become infected. Since it is impossible for the teachers to ascertain every child which has associated during a week or more with the patient, the question arises whether the whole school should not be regarded as suspect. In other words, the principle of isolating the contacts would resolve itself into the closure of the school. Since this method has invariably led to a spread of the diseases in question outside the school, it would be far better to admit all contacts to school, and to exercise a careful surveillance on each child, with the view of the immediate isolation of any child showing the slightest departure from perfect health.

The enteric fever problem cannot be attacked in this manner. Contacts need no special isolation since the disease is infective, but not directly infectious. The communication can be prevented if each case be isolated from the earliest stages, and if the typhoid carrier, a very rare thing among children, is subjected to special regulations. Should a carrier be discovered in a school, there should be but little difficulty in disinfecting both urine and fæces; and for the rest, danger scarcely exists. In regard to the diphtheria carrier, there is also little cause for alarm. A child frequently harbours Eberths's bacilli in the throat for a time after an attack. Carriers who have not suffered from clinically recognizable diphtheria are extremely rare. The precaution necessary is to control the bacterial flora of the fauces after an attack, and to exclude from school all children so long as bacilli of the disease are found.

Of mumps, little need be said, since the infectivity is small if existant during the incubation period, and the isolation of every patient usually suffices to stamp out the disease in a short time. Pertussis is more troublesome but inasmuch as the infection is passed on directly from patient to patient, and rarely by fomities, successful prophylaxis will depend largely on the early recognition of the nature of the cough. It would, therefore, appear that more stress should be laid on the detection of the cases than on the isolation of possible contacts. In regard to ringworm and ophthalmia, since direct contact is necessary for the spread of the disease, and since the diagnosis is, as a rule, not obscure, energetic treatment of existing cases and partial or complete isolation of the patient at an early stage should be sufficient to check their spread through a school. School hygiene is a very important and difficult science, and one for which general measures are unlikely to lead to satisfactory results. The foregoing, if accepted on general grounds, would tend to show that infective diseases in schools can be efficiently dealt with by a competent school medical officer, who is empowered to take such steps to stop an epidemic as he may deem necessary. The moment a

Governmental Department attempts to dictate what measures are to be adopted in every eventuality, the chapter of school hygiene will be put back twenty years.

MEDICAL EDUCATION IN MELBOURNE.

Professor Berry's scheme for the rebuilding of the Medical School of the Melbourne University, which was described in the daily press last week, and which was considered by the Council of the University on Monday last October 19, 1914, involves a much more important principle than the mere spending of £160,000. Its essence appears to be founded on the desire to institute an efficient clinical teaching centre, and to offer to the successive generations of medical students opportunities for co-ordinating theoretical with practical medicine. Excellent equipment is not necessarily the foundation of good work. But even if the greatest achievements in medical science have been accomplished in unsuitable surroundings and with indifferent apparatus, good results cannot be expected on a large scale unless the conditions of work are satisfactory. Clinical teaching is now recognized as an important part of the medical student's training. Clinical teaching, to yield the best results, must be carried out under favourable circumstances, in well equipped and adapted hospitals, by capable and energetic teachers, and in association with practical laboratory work. The first essential is a staff of first-class clinicians to act as teachers. In this respect Melbourne is well supplied. The second is a large and well organized hospital, with a constant supply of what is usually spoken of as "clinical material." Examples of the more common maladies in all stages, with occasional cases of medical rarities, must be secured for the adequate training of students. Associated with the wards in which the future practitioner is to acquire his knowledge, experience and skill should be clinical laboratories, where the various analyses, tests and investigations, on which diagnosis is so frequently dependent, can be carried out. It is further advisable to bring the pathological department of the hospital into direct association with the medical school, and to link up the academic, theoretical with the practical teaching of the student.

Various methods have been tried in the past in University towns, and each method has its advantages. The simplest form of medical school institution, and the oldest, appears to be the best. The hospital is utilized for the complete training of the student from the time of his entry to the time of the passing of his final examinations. Some Universities in England and on the Continent have set aside separate buildings for the teaching of biology, anatomy, physiology, chemistry and materia medica. At times these buildings are situated at some distance from the hospitals where clinical medicine, surgery and gynæcology are taught. Apart from the great loss of time experienced by the students in going backwards and forwards between the lecture theatres and the wards, this arrangement is fraught with disadvantages, more especially for senior students. Clinical lectures should at times be delivered in a properly planned lecture theatre, in order that the maximum number of students may benefit. This theatre must be situated in close proximity to the wards. Again, nothing could be more absurd than the teaching of materia medica divorced from practical therapeutics. To attempt to instill the principles of the use of drugs in the treatment of disease in a building which does not contain patients under treatment, is an unnecessary waste of energy.

Another aspect of the close association of the medical school and its laboratory equipment with the hospital, is found in connexion with the investigation into the causes of disease and its prophylaxis. A great deal of playing with culture tubes and theorizing on imaginary facts, passes at the present day for research, but encouragement should be given to serious and honest workers to observe and investigate important phenomena in a scientific manner, and to utilize their ingenuity in attempting to solve the problems of the nature of diseases and their prevention or cure. The medical school should contain laboratories for this purpose, and these laboratories should be so situated that the patients in the wards are accessible to the research worker. It therefore appears that from the point of view

of the education of the medical student, and from the point of view of the investigator, the medical school and the hospital should be placed as close to one another as possible. That the training of the students and the provision of facilities for genuine research work are matter of the utmost importance to the public, goes without saying. It may, therefore, be said that the fundamental part of Professor Berry's scheme is sound, and will command the approval of those who have the public welfare at heart.

The scheme in brief consists of the erection of a six-storey building within the grounds of the Melbourne Hospital, at the corner of Lonsdale and Russell streets. According to the plans, the basement is to contain a common room for the hospital staff and students, and various rooms for the use of the students. On the ground floor the administrative department of the school, including the offices of the Dean of the Faculty of Medicine, will be placed. In addition, a library and the various pathological laboratories will be found on this floor The second floor is to be given over entirely to the bacteriological department. Various class rooms, lecture theatres, and laboratories for the teaching of medicine, surgery, obstetrics and gynæcology, therapeutics and forensic medicines are to occupy the second floor. It is suggested that one of the theatres should be handed over to the use of the Medical Society of Victoria and other medical societies for the holding of clinical and scientific meetings. The bio-chemical, psychiatric and neurological laboratories are to be placed on the third floor. On the fourth floor, the most important of all the departments of a medical school, namely, the physiological, is to be housed, while anatomy, embryology and anthropology will be found on the fifth floor. The scheme, we understand, provides for the reconstruction of the present medical school as a new department for Science, and this is worked out on two plans—the one to include chemistry, and the second to exclude it. It further embraces the erection of new buildings for Arts, either in Madelaine-street or in Wilson-street. The accommodation for the various faculties has been worked out, and from the figures published it appears that each faculty or department would command sufficient room for its present needs and for future expansion. It is stated that the Victorian Government has already been informed by the University that £128,000 are needed for building purposes. This estimate was arrived at on the assumption that the existing medical school would be extended to meet its actual requirements. It is unlikely that the Government would grant so large a sum of money for the extension of a system which has been shown to be less satisfactory than the scheme evolved by Professor Berry. A large number of reasons have been given in favour of the adoption of the plan, and four difficulties are enumerated. The two first should not be difficult to overcome. They are the facts that the Medical School and the Medical Society of Victoria cannot be transferred from their present situations without the consent of the Government, and that the erection of the medical schools buildings in the grounds of the hospital will require the sanction of the Governors of that institution. The fourth difficulty given could be met if diplomatic negotiations were carried out. It is that there may be opposition on the part of other clinical schools. The third difficulty is not a difficulty at all, but is a serious disadvantage. It is that future extension, both of the medical school and of the hospital, would be fraught with difficulties. Nothing is impossible but it may be that a difficult task is not worth doing. The Melbourne Hospital is a large institution, and stands on an extensive area. If the hospital were to prove too small for future needs, it would be possible to purchase additional land for the purpose of extension. But the experience of the majority of those who have dealt with large hospitals tends to show that it is inadvisable to extend a teaching hospital beyond a definite limit, and that the need for additional hospital accommodation is best met by the institution of a new hospital. In regard to the possible future extension of the medical school, this argument cannot be applied. In the case of the Medical School of the Sydney University, ample room for extension has been provided for, and as far as it is possible to foresee, future generations of medical students will find satisfactory accommodation, or, what is still better, the room for installing it in accordance with

the time. Professor Berry's building is to be six stories high. It is possible that an extension upwards might suffice, but we must admit that at first sight, the admission that any future extension of the school would be rendered difficult, appears to be a serious defect of the scheme. Perhaps Professor Berry has a suggestion to make to remove this defect. In all other respects the idea is excellent.

THE NEW OPERATING THEATRE AT THE BRISBANE HOSPITAL.

The new operating theatre with its "dependence," which has been built in the Brisbane General Hospital, was formally opened by the Premier on October 12, 1914. There was a distinguished gathering at the ceremony. The funds for the building were provided partly by the Walter Hall Bequest and partly by the Queensland Government. The theatre is modern in every part and device, and may be regarded as a pattern of what an operating theatre should be. Every attention has been paid to aseptic construction, good lighting, ventilation, and the like. Operating theatres tend to be like new-born babies—very alike one another—but the excellence of any one must depend on the employment of those materials and forms which have proved, by experience, to have special advantages. The Brisbane theatre, and all the rooms connected with it, have been planned with due regard to the results obtained elsewhere, and the architects and the staff of the hospital are to be congratulated on having secured so efficient a building.

The Chairman of the Hospital Committee made some interesting remarks in his speech at the opening. He pointed out that the Premier had been the means of obtaining the sum of £3,000 from the Walter Hall Trust for the purpose some two years ago, when he learned that the hospital was in need of a modern theatre. To this sum he had added another £3,000 out of the Governmental moneys, and the total sum had been spent, with the exception of a small amount, on the building and equipment. He also called attention to the building of an out-patients' department and of a nurses' home, which was progressing, and also to the installation of a new hot water system and electric light system. When all these additions and alterations are completed, the Brisbane General Hospital will be among the best institutions of its kind in the Commonwealth.

The Premier expressed his pleasure in performing the function of opening the new theatre, and stated that none of the benefactions of the late Walter Russell Hall would yield richer blessings to humanity than this building. He spoke with happy emphasis on the benefit which it would confer on the suffering sick and the medical profession. The old operating theatre had been erected in 1887, and in the course of the first four years 316 operations had been performed in it. In the year 1913, 1800 operations had been performed. The old theatre, which now went out of commission, would be converted into a pathological laboratory. In describing the advantages of the new building, he pointed out that a comfortable room had been provided for the surgeons, with lavatory, shower-bath, and note-taking rooms. A suitable room was provided for the theatre sister and her staff; two rooms were set aside for the administration of anæsthetics, and another room had been equipped with the most modern and up-to-date sterilizing outfit that could be obtained. Adjoining the sterilizing room was an apartment with hot and cold water supply, and sinks, in which utensils of various kinds could be cleaned. He paid special tribute to the lighting, plain, smooth walls, nickelled metal work and Terazzo floor. A vote of thanks was proposed by Mr. Allan, M.L.A., to the Premier, and was carried by acclamation.

A CONSUMPTION PAMPHLET.

The Medical Branch of the Department of Public Instruction of New South Wales has issued a pamphlet entitled "Consumption, its Cause and Prevention." The pamphlet is addressed to the lay public, and essays to place before persons who have little or no knowledge of the nature of the tuberculosis and the manner in which it is contracted, some of the salient facts. The pamphlet is profusely illustrated, and heavy type is made free use of. We are glad to see that the policy adopted in so many of the publications of this character, namely, of depicting the terrible results of ignorance, want of cleanliness, etc., is not followed in this case. Whether the reproduction of a microscopic film of sputum containing tubercle bacilli or of a picture of edibles can serve any useful purpose is doubtful. Much of the advice given is direct and healthy, but we are afraid that some of it is not likely to be followed. We presume that the pamphlet will be distributed among school children and their relatives, and hope that the lessons contained will be taken seriously to heart.

At a meeting of the hospital committee, held at Many Peaks, Queensland, on Oct. 10, 1914, the question was raised as to whether it would be permissible to charge the wives of miners sixpence a week toward the expenses of erecting a suitable building for the treatment of diphtheria patients. The Home Secretary had been interviewed, and had decided that no subscriptions should be levied from miners' wives. The local authority would have to provide suitable accommodation for all persons suffering from infective diseases, or make some arrangement with the hospital committee. In the absence of any such provision or arrangement the hospital committee would have the right to refuse admission to any patient.

The Committee of the Eye and Ear Hospital, Melbourne, is seeking three medical practitioners to fill vacancies on the Resident Staff. Candidates for these posts may rest assured that the work will be both interesting and instructive, and that opportunity will be offered to men who are desirous of gaining knowledge and skill in the special branches of ophthalmology, etology, rhinology, and laryngology. The hospital has a fully equipped laboratory and an excellent X-ray outfit.

Abstracts from Current Medical Literature.

MEDICINE.

(162) Aplastic Anæmia.

J. H. Musser, jun. ("Archiv. Int. Med.," August, 1914) reports a case of this rare disease, and presents a careful study of its causation. He defines the condition as a type of anæmia differing in many respects from ordinary types of primary and secondary anæmia, but marked especially by retrogressive changes in the bone marrow, which result in a change of the normal red marrow to a fatty marrow. He summarizes our present knowledge on the subject as follows:—It is a disease of early adult life. Its course is rapid and progressive. Subcutaneous and sub-mucous hæmorrhages are characteristic. Fever is almost invariable at some time or other during the disease. The blood picture is typical, and unlike that of any other blood disorder. An intense anæmia is present, and a low colour index is the rule. There is also a pronounced leucopenia. The red cells exhibit no abnormality of appearance, whilst megaloblasts and normoblasts are entirely absent. This forcibly indicates the absence of any regenerative action on the part of the marrow. Although leucopenia is present, there is a marked relative hymphocytosis, while the granular cells are almost entirely absent. Post-mortem examination reveals complete aplasia of the marrow of the long bones. The spleen is of the hyperplastic type. The author recounts the history of a patient, a women of 47, who had been ill for seven weeks. The symptoms were epistaxis, subcutaneous hæmorrhages, purpura, bruising on slight trauma and the usual concomitants of anæmia. It was doubtful whether she had had syphilis. The sphygmanometer cuff caused a subcutaneous hæmorrhage. Her blood contained 1,390,000 red and 1,950 white corpuscles per c.mm., and 21 per cent. hæmoglobin. 29 per cent. of the leucocytes were lymphocytes, and 11 per cent. polymorpho-nuclear neutrophiles. The red cells exhibited a decrease of the maximal resistance to hypertonic saline solutions, while the minimal resistance was unchanged. The blood culture proved negative. The patient died three days after admission. Her temperature was raised before death. In discussing the case, Musser claims that all the findings were typical of aplastic anæmia, although no post-mortem examination could be procured. He states that there are three main group of anæmias: (1) the type that occurs as a result of hæmorrhage, acute or repeated; (2) the type that depends upon primary disease of the marrow, and is exemplified in leukæmia; and (3) the type which depends on the direct or indirect destructive action of some toxin on the red cells, of which primary pernicious anæmia may be cited as an example. Most authorities have considered aplastic anæmia to be due to either repeated hæmorrhages or have taken it to be a type of pernicious anæmia associated with profound impairment of the regenerative power of the marrow. He quotes the experimental work of Blumenthal and Morawitz as offering strong evidence against the production of the disease by repeated hæmorrhages, and then proceeds to discuss the possibilities of its genesis from some hæmolytic toxin. Against such a probability he advances the absence of any evidence of rapid hæmolysis, which would be expected in a disease of such shortness of duration. There is no sign of urobilogenuria or of jaundice, nor is there any decrease of resistance of the red cells to hypotonic saline solution such as occurs when hæmolytic immune serum is injected into animals. Moreover, there is no indication of hæmosiderosis of the internal organs. He considers that the marrow changes in aplastic anæmia are primary, and adduces the following reasons: (a) the resistance of the blood cells to hypotonic saline solutions, (b) the absence of any sign of regeneration in the blood, and (c) the dissimilarity of the clinical course from that of a hæmolytic anæmia. In addition, he quotes the work of Lelling, who showed that repeated doses of benzol finally produced almost complete aplasia of the marrow, whilst injuring the circulating erythrocytes only to a very limited extent. He concludes, therefore, that "aplastic anæmia is secondary to marrow changes, which in turn are dependent on some known or unknown cause."

(163) Statistical Study of Syphilis.

Charles J. White ("Journ. A.M.A.," August 8, 1914) reports that, in a study of 1016 cases of syphilis, 500 of tabes dorsalis and 175 of general paralysis, he finds strong evidence in support of the theory that patients who suffer most from recurrent and late cutaneous syphilis do not develop tabes and general paralysis, and conversely. Of 1016 syphilitic patients with primary, secondary and tertiary manifestations observed in the years 1904-1914, only 9 developed tabes or general paralysis, although many were cases of long standing. Of 500 cases of tabes dorsalis, only 3 per cent. had ever manifested any late cutaneous syphilidis, and of 178 cases of general paralysis a little over 1 per cent. had suffered from late cutaneous syphilis. 94 per cent. of the cases of tabes were emigrants or descendants of emigrants from the British Isles, and the sexes were attacked in the ratio of six men to one woman. In general paralysis the ratio was ten men to one woman.

(164) Yellow Fever.

G. Delgado Palacios ("Med. Record," July 25, 1914) attributes the endemicity of yellow fever in certain tropical regions to a climatic factor, namely, the presence in the fæces of a special substance he calls cholerythrogen, which is contained, in granular concretions, in nearly every specimen of human fæces in these regions. This substance yields a purple colour on hydrolysis with hydrochloric acid, has characteristic speciroscopic qualities and can be easily recognized as a specific substance, somewhat alien to the uroerythrin of temperature climates. The autopsy in fatal cases of yellow fever reveals pigmented granules in the tissues, and these granules consist of cholerythrogen, not of melanin as was previously supposed. This substance is produced in the intestine by specific bacteria, and is intimately but not exclusively related to yellow fever. It is suggestive that Reid found that the addition of fæcal material to the breeding jars of Stegomyia fasciata gave most successful results.

(165) Harmful Effects of Unrefined Sugar Cane Products.

Roy Blosser ("Journ. A.M.A.," Aug. 8, 1914) describes an interesting experiment on two dogs of equal weight and size, to whose ordinary diet were added gradually increasing amounts of a cheap sugar-cane syrup and crystalline cane sugar respectively. The object of the investigation was to find out whether unrefined or partially refined products of sugar-cane (brown sugar, molasses, etc.) contain some deleterious substance, which is absent from the fully refined product. The dogs were given the same quantity of the sweets, allowing for the water in the syrup. After a six months' experiment, Dog I., fed with syrup, was ill-developed in bone and muscle, lacked energy and had symptoms of intestinal disorders. On withdrawal of the syrup, it became ill and refused its food. On resuming the syrup it returned to its previous state of health. Dog II. was robust and active throughout, and withdrawal of the sugar from its diet made no change. The experiment was regarded as negative. In Dog I. the post-mortem examination showed necroses of lymphoid tissue in the intestinal wall, an early intralobular cirrhosis of the liver, with fatty degeneration of liver cells and irritative degeneration of the kidney to a less extent. The author suggests the existence of a habit-forming substance in unrefined sugar-cane products, which produces constitutional effects, and possibly in this way causes dental caries in children who eat too many sweets.

(166) Some Problems in Genetics.

Thomas E. Satterthwaite ("Med. Record," July 25, 1914) refers to the history of the Jukes and Kallikak families as examples proving that matings of any sort should be amenable to some kind of regulation. According to Mendelian principles, there is a greater likelihood that such inherited diseases as insanity, epilepsy, deaf mutism will be transmitted, than that they will not. The field of eugenics is restricted in regard to human beings, but much can be done by prevention of disease and its transmission, and by educating the adult public in the prin-

ciples of heredity, for the laws of Mendel enable us to tell in advance what the expectations will be as to offspring in fit and unfit matings. Rosanoff has elaborated six additional possibilities with respect to the inheritance of a normal or neuropathic constitution, and a study of seventy-two families shows a remarkable correspondence between the theoretical and actual findings. Legislation based on eugenic principles is at present, to a large extent, ineffectual; but eventually public opinion will be aroused by the evasion of the law and make its verdict felt. Such legislation should first be passed by special medical organizations. Eugenics stop short at the birth of the individual—the most essential attribute of mankind, human character, is still to be formed by training and environment.

NEUROLOGY.

(167) Syphilitic Tests in Latent and Treated Syphilis.

Corson-White and Ludlum ("Journal of Nervous and Mental Diseases," May, 1914) remark that the complete disappearance of symptoms in cases of syphilis, at certain periods giving rise to a state of apparently perfect health—a condition described by Ehrlich as a "non-sterilizing immunity"—may occur spontaneously or as the result of treatment, and may last for years. For the safety of the patient, the true significance of this period is most important, for the continued existence of the organism renders the individual always liable to recrudescence of the infection, and possibly to the more serious ravages of para-syphilitic diseases. The voluminous literature on the subject of the Wassermann reaction shows that in the so-called latent periods of syphilis with apparent health, only about thirty per cent. of the cases give negative results, and after Donath's provocative treatment the negative reaction is changed into a positive one in about 9 per cent. of the serums. The luetin test devised by Noguchi, besides the decided advantage of a true specificity, gives the most constant results in tertiary latent and late hereditary cases. It is impossible to state accurately the length of the latent period. A positive reaction may be obtained when the resistance of the body is lowered by some cause or other, and the individual with latent disease develops an active syphilis. In treated cases, having once had a positive reaction, the quantitative reaction is the best index of the intensity of disease and of the effect of the treatment. The authors submit some tables based upon work done during the last two and a half years, which are intended to show primarily the significance of negative reactions in families of infected individuals, and in apparently well-treated patients with syphilitic histories, and incidentally to demonstrate the comparative serological value of various methods of treatment. The great majority of these cases were those not yielding quickly to treatment (late secondaries and tertiaries), and the rather high percentage of positive reactions in the treated cases is due to the fact that the titration was as fine as possible, and all results not clearly negative were counted as positive. From the tables given it is evident that the negative reactions occur slightly earlier with Wassermann's technique than with Noguchi's, and both give earlier negative results than can be demonstrated with the luetin. Excluding the cases of paresis and tabes in which the luetin test results were irregular, the authors found that every form of treatment reduced quantitatively the antibody content of the serum. The reduction was less marked in cases in which treatment was started when there was a strongly positive reaction of antibody than in those with a weak reaction. It was much less in late than in early stages. The most marked reduction in the reaction appears in those cases treated with mercury and salvarsan or neosalvarsan, and next in those with salvarsan or neosalvarsan alone. Salvarsan apparently acts more rapidly than the neosalvarsan, although apparently the neosalvarsan remains longer in the blood than the salvarsan. Mercury gives a slow, steady diminution. The serum of patients after long continuation of any type of treatment may show a progressive slowing of the reduction of the antibody content, and in some cases even a stationary period. The authors conclude that negative reactions do not necessarily mean absence of syphilitic infection or cure, even although the reaction has been negative for considerable time. The luetin test is less easily influenced by treatment, and is to-day the best criterion of genuine cure or absence of infection.

(168) Paralysis Agitans Syndrome with Syphilis.

Camp ("Journal of Nervous and Mental Disease," August, 1914) records the following case:—A married woman, aged 53 years, was admitted to hospital complaining of difficulty in walking and in the use of her right hand, in which there was a constant rhythmic tremor. She had been married twice, but had had no children. Three years previously she had her uterus and ovaries removed for a fibroid tumour, but had had no other serious illness. Two years before admission to hospital she had an attack of acute burning sensation in her stomach, which lasted several days, and the tremor in the hand began at the same time. Six months later she experienced shooting pains in the legs, with some paræsthesiæ, and several attacks of epigastric pain. On examination, she was found to present the characteristic mask-like face, and the typical rhythmic tremor of paralysis agitans in the right arm and hand. There was also some lateral oscillatory tremor of the head. Occasionally there was a tremor of the left arm and the right leg. She had Argyll-Robertson pupils, the right pupil being larger than the left. Both eyes showed changes similar to retinitis circinata. Her steps were short, and there was some tendency to propulsion. If her eyes were closed she staggered and could not walk at all. The arm and knee jerks were active and equal on both sides. No ankle jerk was obtained, and the plantar response was flexor on both sides. Sensation to touch and pinpoint was normal on the face and upper extremities, and localizing sense was normal in the fingers. Sensation to pinpoint was delayed over the outer portions of both thighs and in the right leg below the knee. Light touch was not felt in the right leg below the knee except on the sole of the foot. The sense of motion and position of the toes was lost on both sides. The Wassermann reaction was positive in both the blood and cerebrospinal fluid. She was given three intravenous injections of neosalvarsan, after which there was an improvement in the sensation in the feet, less rigidity and practically no tremor. Three months later her condition was much the same, and the Wassermann reaction in both blood and cerebrospinal fluid was strongly positive. The author also reports the result of a study of the cerebrospinal fluid in ten cases of paralysis agitans. In all of these he found it to be normal. The cell count averaged under four, the globulin and albumin were not increased, and the reducing substance was present. Six of these patients received intravenous injections of neosalvarsan. One who had had the disease about two years claimed that the tremor was lessened, that his appetite was better, and he had less stiffness; objectively, there was a slight lessening of the rigidity, but the characteristic tremor persisted. In two other cases there was subjective improvement, but no obvious objective change. In three other cases the treatment had no effect whatever. The author, therefore, concludes that a typical Parkinson syndrome may co-exist with, and be caused by, a syphilitic lesion in the central nervous system, but that this is not the etiology of the disease "paralysis agitans," and that any lesion in the central nervous system causing a Parkinson syndrome is likely to be an irritative rather than a destructive one.

(169) Pseudo-Hypertrophic Muscular Dystrophy.

A. F. F. Shaw records two typical cases of pseudo-hyper-trophic muscular dystrophy (Dublin Journ. of Med. Science, August, 1914), and points out that the pronounced muscular weakness which is not due to loss of muscular sense is the most evident feature of the condition. The reflexes are sometimes present and sometimes absent. In regard to causation, all that is known is that the disease is hereditary. There may be direct hereditary, familial incidence, female transmission, or sex limitation.

Contract Practice.

II.

THE AERZTETAG IN MUNICH.

It will be remembered that the destinies of the medical profession in Germany lie in the hands of a body which meets annually, and which is known as the "Aerztetag," or Medical Parliament. This meeting was instituted in 1875. In 1900, when the Leipzig League first started to carry out the medico-political work of the Federation of German Medical Societies, the Aerztetag became at the same time the annual meeting of the Leipzig League. Under ordinary conditions the meeting does not attract much attention among the profession generally. The debates are apt to become academic and tedious, and a certain amount of intolerance is shown when one or other member indulges in rhetorical eloquence. The 1914 meeting at Munich was of a totally different character. Keenness was manifested both within the hall and throughout the whole profession. The speeches were of an unusually high standard, their contents rather than the style formed the criterion on which they were judged, and moderation, firmness and earnestness were markedly in evidence.

On Wednesday evening, June 24, 1914, a great gathering of delegates took place at the old "Rathaus." The Municipality of Munich, as is the wont, entertained their guests, but never before were so many present on the eve of the meeting. When Dr. Hartmann opened the meeting at 9 o'clock on the following morning every member was in his place. Scarcely a face showed a trace of the results of the previous night's festivities. Dr. Hartmann's first act was to greet a new member, Prince Ludwig Ferdinand von Bayern, who is not only a prince, but is also a medical practitioner, who undertakes contract practice. After Dr. Dippe had performed the usual stereotype business of a meeting of this kind, and had read out an unsually long list of members who had died during the year, the debate on the Berlin Agreement was begun. It is the custom of German meetings for one or more members to present a semi-official "rapport" dealing with the matter under consideration. These "rapports" are composed by the individual or individuals selected with the assistance of information collected officially. Dr. Hartmann was the official "rapporteur" on this occasion. He limited himself to a brief record of fact, more especially in connexion with the occurrences since Christmas. He was anxious not to influence opinions at this stage, but merely to inform the meeting of what had actually taken place. A large number of speeches followed. Delegates from every part of the Empire supplemented Dr. Hartmann's account by reciting the experience of the profession in various localities. Dr. Schneider, of Potsdam, attempted, in a very capable speech, to set forth the arguments against the Berlin Agreement. In the articles dealing with the agreement, published in the "British Medical Journal," many of the objections which had been raised are discussed. The speech served a very useful purpose in that it illuminated the defects of the agreement, and defined the concessions agreed to by the medical signatories. It had the effect of eliciting an extremely powerful reply from Dr. Levy, of Graudenz. Dr. Levy showed that the price paid for peace was quite commensurate with the objects attained. Up to December 23, 1913, the profession had been faced with a struggle which might have taken years to end in a manner satisfactory to the profession. The broad principles of the policy of the Leipzig League had not been disturbed by the agreement, and its acceptance by the whole profession had brought a settlement of the insurance difficulty within reach. He pointed out that the organization of the medical profession would tend to weaken if the fight with the Insurance Societies was kept up too long. More progress could be made in one year of peace than in ten years of struggle.

Dr. Dippe paid a great tribute to the General Secretary of the League, and his colleagues for the marvellous manner in which the work had been carried out. During the course of the year the office of the Leipzig League had dealt with 9,771 telegrams and special messages, 11,644 telephone messages, and 480,609 letters. Apart from this, Dr. Hartmann had had innumerable interviews at all hours of the day and night, had drafted reports, and had always been prepared to give full consideration to every exigency which had arisen, and had borne the full responsibility in carrying out the policy which would determine the fate of the medical profession. He emphasized the uncertainty which would have attended a continuation of the struggle along the old line, and while he recognized the difficulties obtaining in working on the basis of the Berlin Agreement, he advised the meeting most strongly to accept its terms. The Government had only been able to lend its assistance within the narrow limits of its official activity. From the speeches that followed it became clear that the vast majority were prepared to regard the condition of affairs at Elbing, where eight strike-breakers were employed for a population of about 22,000 as a test case. It was necessary for the doctors to enforce the terms of the agreement in this little town, and each speaker expressed the opinion that the whole profession would stand behind the loyal members of the League in Elbing.

It was determined that the policy of the profession in regard to insurance work was not only in the interest of the independence and dignity of insurance doctors, but was also calculated to improve the health conditions of the insured, and to favour the stability of the Insurance Societies. In view of the fact that the Berlin Agreement is based on the adoption of a number of the items of this policy, it was decided that all the local societies, sections and divisions of the Leipzig League should recognize the agreement, and should take the most energetic means possible to carry it into effect.

The meeting further determined that an effort should be made to induce the Government, and Insurance Departments, and also the Federations of Insurance Societies, to co-operate with the Leipzig League in a friendly manner. The essential basis for a friendly co-operation between the doctors and the Insurance Societies would be the carrying out of the terms of the agreement, and especially the immediate discharge of the strike-breakers.

The Industrial Unions.

Considerable difficulty had been experienced in regard to the insurance of members of industrial unions (Berufsgenossenschaften). It is unnecessary to recite the various causes of friction between the doctors and these unions, more especially since many of the differences were of a local character. As elsewhere, the medical profession in Germany regards the attendance on persons of the prosperous industrial classes in a different light from that on the ordinary wage-earners. The result of the debate is contained in the following resolution, which was passed:—

> "The German Aerztetag requests the Imperial Government and Imperial Parliament to amend the provisions of the Imperial Insurance Order in such a manner that the members of insurance societies must, under certain circumstances, pay a percentage contribution, however small, toward the cost of medical attendance and medicine."

Free Medical Attendance.

The Leipzig League had taken up the question of the advisability and permissibility of medical men giving their services in a professional capacity without payment. Professor Lennhoff, of Berlin, was chosen to deal with this subject. He pointed out that the time had passed when the public had a right to claim the services of doctors for a large number of purposes without payment. A number of persons and corporate bodies, however, still attempted to utilize the medical profession in an unfair manner in the carrying out of sociological work. There were certain duties which every citizen should perform in the interest of the public welfare. Professor Lennhoff set himself the task of defining the conditions under which the services of medical men should be given without payment. His chief difficulty lay in the fact that in all previous discussions it was held that gratuitous professional services should be rendered in undertakings having the object of benefitting the public (gemeinnützig).

A little consideration showed that this definition included practically all the undertakings of the State and philanthropic societies. He therefore suggested that the endeavour to improve the public welfare should not necessarily

govern the duty of medical practitioners in giving gratuitous service. On the other hand "charity" in its widest sense should be regarded as demanding the assistance of the medical profession. He instanced the practice of the Railway Departments and of various public industrial firms in using the organization of the Red Cross Society as an easy and cheap method of securing first-aid in cases of accident and sudden illness. In this instance there is no question of a charitable principle being involved, although the action might be held to be one aiming at the improvement of the public welfare. The arguments in favour of each of the resolutions appended below were given in clear and concise terms, and the resolutions were adopted after a short debate. They were as follows:—

(1) The members of the medical profession in Germany are in honour bound to tender grâtuitous charitable medical service; precaution should, however, be taken to prevent abuse.

(2) It does not follow that because an undertaking is held to be in the interest of the public welfare that medical professional services should be rendered gratuitously.

(3) Gratuitous medical service may only be claimed when the undertaking does not lie in the sphere of Governmental or other official activity, and when those responsible for the undertakings offer assistance either free or in response to a very small payment.

(4) In individual cases the question as to whether payment shall be required or not must depend on the special nature of the undertaking, and on the special nature of the medical services required.

(5) Special conditions justifying a claim for gratuitous service, after investigation, may be regarded to exist in connexion with the training of members of industrial societies as voluntary nurses during warfare, in the training of members of ambulance corps, and of the members of the Red Cross Society.

(6) When medical practitioners carry out the training of person without payment a written undertaking, signed by those responsible for the organization and by the persons undergoing the training must be obtained, that they may not, and will not, engage in any form of medical practice, especially in reference to par. 370 of the Imperial Insurance Order.

(7) The question as to whether medical service shall be rendered gratuitously to an undertaking aiming at the improvement of the public warfare (gemeinnütziges Unternehmen) shall in all cases be referred to the local medical organization. Appeals against the decision of the local profession may be lodged before a committee appointed for the purpose by the Executive Council of the Federation of German Medical Societies.

The reference made in the sixth resolution to paragraph 370 of the Imperial Insurance Order requires a little explanation. The paragraph in question actually provides for the payment by the Insurance Societies of a lump sum of money in lieu of medical attendance, medicines, etc., in cases when the services of an insurance doctor cannot be obtained. In order to carry this arrangement into effect it is necessary in the first place to obtain special permission from the Chief Insurance Office, and in the second place evidence of illness must be produced before any money is paid over. Since no insurance doctors would be available, the authorities were faced with the difficulty as to who should sign the certificates. They were apparently loath to require either the insurance societies or the patients to pay a fee for this purpose to a private practitioner. The Imperial Ministry for Internal Affairs, on being applied to, determined that the controllers of the insurance societies, the officers of district councils, the managers of large properties, employers, midwives, nurses or other persons possessing sufficient "responsibility and special knowledge" might sign and deliver the certificates. The medical profession recognized the extreme danger of this interpretation of the paragraph, and it was pointed out that in effect it would be legalizing quack practice. Whether the resolution passed at Munich would materially lessen the risk is not quite clear.

In connection with the subject of the campaign against quackery, the meeting resolved to raise the subscription to the Federation by 1 mark (circa one shilling), for the purpose of assisting the German Society for the Suppression of Quackery.

British Medical Association News.

SCIENTIFIC.

At a meeting of the Queensland branch, held in the B.M.A. Rooms, Brisbane, on October 2, 1914, Dr. D. A. Cameron showed a specimen of multiple calculi removed from a hydronephrotic kidney.

Dr. McKillop (Blackall) exhibited two specimens of uterine myomata.

Dr. McKillop's paper on "Three cases of omento-parietal adhesions associated with Intestinal Stasis," and Dr. Williams's paper on a "Case of Sprue" were read by the Hon. Secretary and President respectively. We hope to publish these papers in a future issue.

MEDICO-POLITICAL.

A meeting of the Council of the Victorian Branch was held at the Medical Society Hall, Melbourne, on Thursday, Oct. 15, 1914, Dr. Kenny, the President, in the chair.

A resolution was passed to the effect that the Australasian Medical Publishing Company be advised that the Branch was unable to contribute the 20/- per year per member, as suggested, for the Medical Journal of Australia, but that after its annual balance sheet had been made up and confirmed, as large a sum as possible would be paid for this purpose out of the balance. The question of mixed hospitals was again before the Council, and the Council expressed its distrust in the principle of using public funds—whether in the shape of Government-aided buildings or a Government annual subsidy—towards the treatment of patients who are in a position to pay for medical attendance. In the absence of any satisfactory safeguards to prevent imposition on the public money and the medical profession, by admitting a mixed class of cases, the Council could not advise the acceptance of the position of honorary medical officer to such a hospital.

The approval of the Auditor to the scheme of winding up the affairs of the Australian Medical Journal (which, up to June 30, 1914, had been the organ of the Victorian Branch), was laid before the Council; and the Treasurer was instructed to pay the liabilities of the Medical Society to the Journal to the amount of £97 1s. 8d. It is expected that after the realization of assets has been completed, there will be a credit balance of considerably over £100.

The Organization Committee reported a communication from the District Secretary of the Ancient Order of Foresters, in which he maintained that there was no truce accepted by the Order, and that his proposed action in calling upon the Order to reduce the number of doctors was quite within the rights of the Executive Committee. A letter in reply was forwarded to the District Secretary of the Ancient Order of Foresters. Numerous reports of Sub-Divisional Meetings came to hand, in which suggestions were offered to the Council; and all supported the Council in any action that it should think fit to take.

It was decided that the Annual General Meeting should be held on December 2, 1914; that nomination papers should be sent out to all members and that they be invited to nominate members for the positions of office-bearers and members of Council.

A meeting of the Queensland Branch was held in the B.M.A. Rooms, Brisbane, on Friday, October 2, 1914, Dr. Brockway, the Acting-President, in the chair.

The Chairman moved, and Dr. Gibson seconded, that a letter of sympathy be sent to Dr. Turner, who met with an accident recently.

A letter was read from Dr. Turner, withdrawing his resignation as a member of the Branch. The letter was accepted.

A letter from Dr. Pockley, thanking the Branch for its expression of sympathy on the death of his son, was read.

A letter from Colonel Sutton was read, thanking the Branch for its good wishes to the Expeditionary Force.

A letter from Dr. Todd, Secretary "Medical Journal of Australia," asking for an increase in the annual subscription to the Journal to £1 was read. Dr. Robertson moved that this be granted. Dr. Lockhart Gibson seconded. The motion was put to the meeting, and was carried with one dissentient.

Dr. Carvosso moved that the Common Form of Agreement be allowed to lapse for the present on account of the misleading paragraph published in the press. Dr. Culpin, senior, seconded the motion. After some discussion the motion was put to the meeting, one voting for it and 14 against it.

The following have been elected members of the New South Wales Branch:—

Dr. T. R. E. Davis, Royal Prince Alfred Hospital.

Dr. Joshua Young-Wai, Goodooga.

The following have been nominated for election:—

Dr. Robert Kellas, Lismore.

Dr. Lennox Graham Teece, Royal Prince Alfred Hospital.

Public Health.

SMALL-POX IN SYDNEY.

The number of small-pox cases reported to the Department of Public Health, New South Wales, during the week ended October 18, 1914, were:—

City of Sydney and Metropolitan District 12

Some further cases have occurred in the Yass district, but particulars concerning them cannot be supplied until next week.

INFECTIVE DISEASES IN WESTERN AUSTRALIA.

The notifications received by the Department of Public Health, Western Australia, for the week ended September 26, 1914, were:—

	Typhoid.	Diphtheria.	Scarlet Fever.	Phthisis.
Fremantle ..	—	—	—	1
Claremont ..	—	—	—	1
Subiaco ..	—	4	—	—
Perth ..	—	3	1	2
Belmont ..	1	—	—	—
Kalgoorlie ..	—	4	—	—
Boulder ..	1	—	—	2
Gennabering, via Quairading	—	—	—	1
Burswood ..	1	—	—	—
Coolgardie ..	—	4	—	—

The notifications received by the Department of Public Health, Western Australia, for the week ended October 3, 1914, were:—

	Typhoid.	Diphtheria.	Scarlet Fever.	Phthisis.
Fremantle ..	—	1	—	—
Fremantle E..	—	1	—	—
Subiaco ..	—	—	1	—
Perth ..	2	4	—	3
Midland Junction	—	1	—	1
Kalgoorlie ..	—	2	—	1
Coolgardie ..	—	7	—	—

INFECTIVE DISEASES IN PERTH.

During the period ended October 5, 1914, the following notifications were received by the City Health Officer for Perth, W.A.:—

Tuberculosis	3
Diphtheria	6
Scarlet Fever	1
Enteric Fever	2
Total	12

During the corresponding period last year nine cases were reported.

INFECTIVE DISEASES IN QUEENSLAND.

The following notifications have been received by the Department of Public Health, Queensland, during the week ended October 10, 1914:—

Notifiable Disease.	Cases.
Typhoid Fever	10
Diphtheria	29
Varicella	13
Phthisis	7
Erysipelas	8
Cerebro-Spinal Meningitis	1
Scarlet Fever	3
Puerperal Fever	2
Infantile Paralysis	4
Continued Fever	1
Total	78

THE HEALTH OF QUEENSLAND.

The Commissioner of Public Health of Queensland has issued a very valuable report on the work of his department during the year ending June 30, 1914.

Quoting the statistics furnished by the Government Statistician, he shows that Queensland is as healthy, if not healthier, than any other part of the world. The crude birthrate is 2.01 higher than the average for Australia, and is higher than that of Germany, Holland, Norway, Great Britain, Canada or France. The death-rate per 1000 of population has varied within narrow limits around 10, which is lower than any of the countries mentioned. The infantile mortality at 63.25 per 1000 births is lower than that of any of the other States of Australia or of other countries.

Infective Diseases.

1386 cases of enteric fever were notified during the year. Of this number, 377 were notified from the Brisbane Metropolitan area. The Commissioner is of opinion that this disease is spread by flies more frequently than by any other means. He deals briefly with the "carrier" problem, and shows that in a few instances the disease arose through the intermediation of a "carrier." He advocates in the strongest manner possible the employment of anti-typhoid vaccination for the prevention of the disease.

134 cases of scarlatina were notified during the year, and 32 of puerperal fever. The incidence of diphtheria was still high, 1600 cases having been reported. This number, however, represents a decrease of 828 cases as compared with the previous year. He attributes the decrease to the care taken by the Department of Public Instruction, and to the regular bacteriological examination of the faucial mucus of all children suffering from sore throat.

471 fresh cases of phthisis were notified during the year. The death-rate from tuberculosis in Queensland amounted to 0.62 per 1000 of population, or 5.69 per cent. of the total deaths. In regard to prophylactic measures, the Commissioner points out that it is unnecessary to isolate every consumptive, but that precautions must be taken to prevent the bacilli in the sputum from being deposited on footpaths, floors, etc. A reduction of dirt and dust means a reduction of infection.

He advocates the treatment of early cases in sanatoria, and the isolation of advanced cases.

Venereal Diseases.

Compulsory notification of venereal disease has been introduced in the metropolitan area. During the year, 1090 cases were notified; 122 of these were cases of primary syphilis, 109 of secondary syphilis, and 859 of gonorrhœa. These numbers, however, may be too high inasmuch as

the notification being anonymous, it is probably reduplicated in a number of cases. 398 new cases were treated at the Enthetic Diseases Dispensary. 388 men and 18 women were suffering from gonorrhœa, 66 men and 2 women from syphilis, and 23 men and one woman from both gonorrhœa and syphilis. The source of infection was sought in each case. In 40 instances it was traced to prostitutes from houses whose inmates are examined, in 90 instances to street prostitutes, in 124 instances to non-prostitutes (women who do not receive any payment), and 144 instances to "other sources." In 52 cases, treatment by neo-salvarsan has resulted in apparent cure. After this treatment has been carried out the patients are subjected to a six months' course of mercury. At the Examination Room 81 new patients were treated during the year.

Food and Drug Inspection.

The Commissioner records that the Food and Drug Clauses of the Health Act had been carried out in an energetic and tactful manner, and that the interests of the traders, manufacturers and the public had been safeguarded. 1615 food samples were obtained and analysed, and, as a result of this expedient, 25 tons of food stuffs were destroyed, as compared with 150 tons during the previous year. He points out that the trader is now recognizing that it is useless to stock doubtful lines. Out of 20 samples of beer, 4 failed to pass the test; out of 262 beverages and cordials, 83 were condemned; 22 samples out of 31 custard powder failed to pass the test; in 53 incidences out of 70 the analyst refused to pass tinned fish; 111 samples of spirituous liquors out of 132 were rejected, and a large proportion of the samples of camphorated, castor, essential, olive and paraffin oils were condemned. In regard to milk, 16 samples of the condensed variety were analysed, of which 2 were rejected. 466 samples of ordinary milk were examined, and 90 were condemned, while 4 out of 11 samples of milk preparations failed to pass the test. In regard to the fresh milk, 1.8 per cent. were genuine samples below the standard, 12.2 per cent. were adulterated with water, 2.6 per cent. were deficient in fat, and 0.3 per cent. was unfit for analysis. Details are also published in regard to the various forms of adulteration of the foods and drugs examined. One sample of water submitted had been found in use in a refreshment bar for washing drinking glasses. It was in a filthy condition, containing sour beer, decayed vegetable matter, ants, flies, etc. In all, 59 prosecutions against milk vendors were instituted, and the fines and costs inflicted amounted to £512. Details are also given in regard to other prosecutions under the clauses. A number of excellent photographs illustrate the insanitary condition of factories, the worst cases being a coffee-stall and pie factory in the "back-blocks" and an ice-cream factory underground. The Chief Food Inspector records that the Director of the Laboratory of Micrology tested an "Electric Filter and Sterilizer" which is advertised in Queensland for sale. The Director states that the filter is only a coarse strainer, and as a filter or sterilizer it is a barefaced swindle.

Plague and Rat Destruction.

The Commissioner reports that no case of plague either in man or rodent has been discovered during the year. The campaign against rats is still being conducted with considerable energy. In Brisbane alone 12,005 rats were destroyed during the year. Of these, 9165 were sent to the Laboratory of Microbiology, but in no case were bacilli pestis found. Blood smears to the number of 3368 were sent for examination from out-lying districts. Furthermore, 1896 premises were examined, and 337 notices were served, calling on the occupiers to carry out the requirements provided for in the Order in Council. The Chief Sanitary Inspector gives an account of the structural and other improvements undertaken. A long list of rat-proofing carried out by the Department's gang and by contractors and others, and some striking illustrations exemplify the work of this nature. It is interesting to learn that, since the passing of the Noxious Vermin Order of 1912, the rat destruction gang has become practically self-supporting, the public having to pay for their services.

Mosquito Destruction.

Some very valuable information is contained in this portion of the report. The problem before the Department is the extermination of the Stegomyia fasciata, the conveyor of yellow fever, and Culex fatigans, the conveyor of filariasis, and possibly of dengue fever. Both these mosquitoes abound throughout the metropolis. During the year ending June 30, 1914, 8231 premises were inspected. In these places, 1995 rainwater tanks provided with screens were discovered, while 6251 unprotected tanks were also found. Seventy-nine wells, 116 pools and 19 barrels, as well as 64 roof gutters which were sagging and holding water, were inspected. In 146 premises, collections of rubbish were discovered. 5583 notices were served for the remedy of these defects. Sixty-one of the tanks have been removed, 5764 have been effectively screened, 46 wells were either screened or covered, 5 were filled in with earth, 8 barrels were screened, 80 pools were filled in with earth, and 136 collections of rubbish were removed as a result of the inspections.

The Assistant Inspector of the Mosquito Operations appends a very valuable report, dealing with the conditions obtaining in Queensland in this connexion. He deals with the efficiency of the so-called larvicides. Rock oils, petrolite and argolite, have been used throughout the year. Refined oils evaporate too rapidly in a sub-tropical country like Queensland, while crude oils do not form a thin uniform film on the surface of water. Saprol did not prove itself efficient. Liquid fuel oil and kerosene were found to be quite useless as a larvicide. Cyanide of potassium is unsuited for field world. Cyllin was tried without giving satisfaction. Soapy emulsions of coal tar and terebinthine, emulsions of coal tar and petrol and La Prince's larvicide were also used. In regard to the larvicidal effect of Lemna (duckweed), it appears that an entire coating of this plant on the surface of the water acts in turning out mosquitoes, but careful investigation revealed the fact that the larvæ of Culicinæ can find enough water-surface between the interstices of the leaves of Lemna to breathe, while the anopheline larvæ cannot do so. In consequence of the nature of the breeding-places of the Queensland mosquitoes, little can be done by stocking water collections with fish. In two instances this method has been adopted, apparently with satisfactory results. In the one instance, Priopis olivaceus, Ogilby, and in the other, Rhombatractus fitzroyensis, Castelnau, have been employed. An excellent biological account of the various mosquitoes found in Queensland is given.

Laboratory of Microbiology.

The Director of this Department gives a good account of the work done during the year. The preparation of stock and autogenous vaccines, the examination of body fluids, pathological specimens, etc., and the manufacture of calf-lymph obtains attention in the report.

Nurses' Registration.

Among the many important matters dealt with in the report, that of the Nurses' Registration Board demands attention. The first examination for nurses under the Board was held in December, 1913. A Central Board of Examiners was formed, and certain places were selected as examination centres. Nurses are required to have received a full course of training at the recognized schools before they are admitted to the examination, save in those cases specially provided for in the Act, affecting nurses who have followed the calling of a nurse for a period of three years. The examinations are either not difficult or the standard of efficiency is extraordinarily high in the State. Seventy-one nurses entered for the general, 20 for the midwifery and 63 for the mental examinations. In all, 143 presented themselves for examination, and no less than 122 passed. The official list of registered nurses was published in the "Queensland Government Gazette" of January 31, 1914. At the time of the issue of the report, 235 nurses were undergoing training in the 23 recognized training schools for general work, 17 were receiving midwifery training at four special hospitals, and 78 were appears to be doing its work in a most efficient manner. being trained at the three mental hospitals. The Board

Vital Statistics.

NEW SOUTH WALES.

In the "Government Gazette," dated October 7, 1914, it is recorded that the population of the State of New South

Wales on June 30, 1914, was 1,857,391. During the three months from April 1, 13,159 births had been registered, and 4,749 deaths.

In the "Government Gazette," dated October 14, 1914, the vital statistics of the Newcastle district and of the metropolis of Sydney are dealt with. In the Newcastle district the birth-rate for the quarter ending September 30, 1914, was 9.85 per 1,000 of population, which is equivalent to an annual rate of 39.4. The death-rate for the quarter was 2.71, which is equivalent to an annual death-rate of 10.84. The chief causes of death are given as follows, the actual number being 156: Developmental disease of infants, 21; diseases of the heart, 19; bronchitis, 13; pneumonia, 11; accident, 9; phthisis, 6; diarrhœa and enteritis, 5; cancer, Bright's disease, apoplexy, and suicide, 4 each.

The returns from the metropolis of Sydney for the quarter ended September 30, 1914, reveals a birth-rate of 7.86 per 1,000 of population, which is equivalent to an annual rate of 31.44. The birth-rate for the corresponding quarter in the preceding five-year period averaged 10.9. The death-rate for the quarter worked out at 2.91, which is equivalent to an annual rate of 11.64. The average for the five preceding corresponding quarters was 1.4. The infantile mortality for the quarter showed a decided decrease, being 58 per 1,000 births, as compared with 68, which was the average for the preceding 10 years.

The number of deaths from the principle epidemic diseases, as compared with the average for the corresponding quarter in the preceding five years, was increased in the case of enteric fever (15 against 14), and scarlet fever (4 against 2); and was decreased in the case of diphtheria (20 against 26), influenza (6 against 18), and pertusis (4 against 17). Of the other causes of death the following are given in sequence of frequency: Organic diseases of the heart, cancer, Bright's disease, senility, pneumonia, pulmonary tuberculosis, bronchitis, premature birth, accident and diarrhœa and enteritis.

VICTORIA.

The Government Statistician of Victoria has issued his returns for the quarter ended June 30, 1914, in the Victoria "Government Gazette," dated September 29, 1914, received this week. The estimated population of the State, exclusive of full-blooded aborigines, was 1,421,985 at the end of the quarter. The birth-rate per 1,000 of population was 6.3, which is equivalent to an annual rate of 25.2. The death-rate was 2.8 per 1,000 of population, which is equivalent to an annual rate of 11.2. In regard to the causes of death, the returns give actual numbers for the metropolitan district of Melbourne, other urban districts and rural districts. In Melbourne, Ballarat, Bendigo and Geelong, enteric fever caused 31 deaths, diphtheria and croup 69, measles 9, pulmonary tuberculosis 256, other tubercular diseases 56, and cancer 277; diseases of the circulatory system 273, pneumonia 106, bronchitis and broncho-pneumonia 115, apoplexy 83, diarrhœa and enteritis 91, developmental diseases of infants 160, and senility 157.

HOSPITALS—12pt. BRAD.

CHILDREN'S HOSPITAL, PERTH.

A general meeting of the committee of the Children's Hospital, Perth, was held on October 8, 1914, at which a very unsatisfactory state of affairs was revealed. Lady Hackett raised the question whether any board of management existed. After some discussion two members, who had resigned during the recent trouble, were re-elected, and a third member was newly elected. Notice was given of a motion to amend the method of election of members of the board of management. It was suggested that the Honorary Consulting Surgeon and the Honorary Consulting Physician should be ex-officio members.

The Chairman, in his report, stated that at the end of the present financial year a deficit of between £800 and £1000 would have to be met. The hospital had practically exhausted all its reserve money. Arrangements had been made for an overdraft at the bank of £700, and when this money was exhausted the finance committee would have no further moneys to draw upon. The expenditure in 1913 on maintenance had exceeded £10,000. He did not think that they could raise more than £8000 this year in view of the financial depression caused by the war and the drought. The suggestion that the expenditure should be limited had been made. He had inquired of the Matron whether it would be possible to close one and a half wards, but he had been informed that not more than one could be put out of action. This would mean a reduction in the nursing staff and upkeep, and a saving of £499 15s. 3d. A further sum of £313 could be saved by getting rid of other members of the staff. In the next place he proposed to ask the staff to accept 10 per cent. less of their salary. Dr. Pearson, the Chief Resident Medical Officer, had agreed, and he had every reason to believe that the other members would come to the assistance of the institution in its time of need. In all he hoped to effect a saving of £1100. In some way or another £2000 over and above the £8000 which he anticipated would be forthcoming from ordinary sources, would have to be raised. He was preparing a scheme, the details of which he did not wish to make public at present. In the discussion that followed, it was pointed out that the closure of one ward during the summer time would be a very serious step to take, and the hope was expressed that some means might be found to render this unnecessary.

Special Correspondence.

(From our Special Correspondent.)
LONDON.

Mental Nursing.

At the meeting of the Nursing Conference on May 1st, an interesting paper was read by Dr. Armstrong-Jones on "The Progress of Mental Nursing." He pointed out that, at the present moment, there were probably 140,000 persons mentally afflicted and under care in England and Wales, and about 20,100 persons of all ranks in the United Kingdom were engaged in caring for them in some capacity or another. The duties of the mental nurse were most responsible and trying. The mental therapeutics of displacing insane ideas by new and healthy thoughts, of restoring self-respect, and reviving the familiar daily habits, was not the only work of the mental nurse; she had also the ideal work of a woman, which was nursing the sick. In addition to various diseases, it had to be remembered that in the insane the skin, the muscles, and the bones were præternaturally sensitive, and it was a triumphant testimony to good nursing that at Claybury, with an average attendance of nearly 2,500 insane persons, there was at the present moment no patient with a bed-sore, and such had not been known for several years on the female side and for over a year on the male side. Drawing attention to the scheme of instruction drawn up by the Medico-Psychological Association for mental nurses, he said that he would like to see all holders of the certificate duly registered, not only for their own benefit, but also for the protection of the public.

Having recently visited some asylums abroad, he was convinced that where a religious order was in charge of the nursing work the duties had been performed with loftier ideals and with higher aims than was the custom when wages only were considered. While no person ever did that well which she did for money only, yet nursing ought to be well paid. The nurse owed it to herself and to her patient that she should be in good health. The nurse's work was above all a moral and practical one, not one of show qualities but of quiet, unobtrusive devotion to practical action. If behind and at the root of all that devotion there was a strong force of religious feeling, there was a driving power that could not be rivalled by any other.

In the treatment of insanity there was now a deep feeling that mental diseases should be presented rather than mended or cured. Certainly, no other disorder was so amenable in the early stages as insanity. The National Association for providing trained nurses for the sick poor had now been affiliated to the Queen Victoria's Jubilee Institute, founded through the £70,000 presented to the Queen by the women of England. That institute was in turn affiliated to St. Katherine's Royal Hospital, which was now being reorganized at the instigation of Queen Alexandra.

It was commencing a crusade of preventive work by the appointment of health visitors, and he would greatly like to see the prevention of mental diseases represented by the appointment of asylum nurses. Should that be possible, he trusted that the work so conscientiously and so well carried out in the asylums might see its fruition by making life more vigorous, decay less rapid, and death more remote!

Sleeping Sickness.

The report of the Inter-Departmental Committee on Sleeping Sickness was issued on May 20th.

The terms of reference were as follows:—"To report:

"(1) Upon the present knowledge available on the questions of the parts played by wild animals and tsetse-flies in Africa in the maintenance and spread of trypanosome infections of man and stock.

"(2) Whether it is necessary and feasible to carry out an experiment of game destruction in a localised area in order to gain further knowledge on these questions, and, if so, to decide the locality, probable cost, and other details of such an experiment, and to provide a scheme for its conduct.

"(3) Whether it is advisable to attempt the extermination of wild animals, either generally or locally, with a view of checking the trypanosome diseases of man and stock.

"(4) Whether any other measures should be taken in order to obtain means of controlling these diseases."

The Committee are emphatic in insisting upon the difference between the problem of trypanosomiasis as it arises in Nyasaland and Rhodesia from that occurring in Uganda, and point out that, whereas in the former case the disease is dependent in the main on unknown factors, in the latter case the factors are fairly well known, and the spread of the disease is consequently to a great extent controllable.

The conclusions of the Committee on the advisability of game destruction are given in the following terms:—

"Knowledge of the disease, its cause, and its remedies is still in the making, and hasty and imperfectly considered action of a drastic character, such as the attempt to effect a general destruction of wild animals, is not justified by the evidence before your Committee. On the other hand, your Committee recommend that until direct means of checking the fly have been discovered, the food supply of the fly and the chances of infection should be lessened in the vicinity of centres of population and trade routes by the removal of wild animals, and that for this purpose freedom be granted both to settlers and natives to hunt and destroy the animals within prescribed areas, and subject to prescribed conditions. The proposed experiment of removal of wild animals from a selected area may produce valuable results, both as regards knowledge of the habits of the fly, and as to the extent to which the infectivity of the fly, and subsequently the infection of man or stock, is derived from the wild animals. The result of this experiment cannot be confidently anticipated. There are possible fallacies and uncertainties involved from the very nature of the problem, and in dealing with natural conditions there is always the possibility of unknown factors vitiating or defeating action based on the apparent results of any such experiment. Nevertheless, your Committee think that there is sufficient to justify an expectation of useful results, and they recommend that if a suitable locality can be found where an experiment can be carried out at a reasonable cost it should be undertaken. They are, however, of the opinion that the carrying out of the other measures recommended should not be delayed pending the results of the experiment, which cannot be expected to emerge for two or three years."

The following are among the more interesting general conclusions at which the Committee have arrived:—With regard to the Nyasaland and Rhodesian form of the disease, its incidence on the population is slight and not increasing, the evidence pointing to its being an old disease, endemic and not extensive. There is no apparent reason to anticipate its appearance in an epidemic form, and further experiments are urgently required to determine whether man forms a reservoir of the human trypanosome. If the tsetse fly could be eliminated or removed from contact with human settlements, sleeping sickness would practically disappear, infection by other flies being a negligible factor in the spread of the disease. For this reason the Committee urge a proper and sufficient equipment of entomological research into the bionomics of the incriminated tsetse flies. Accident might at any time lay bare a secret that would lead to the solution of the problem. There should be devoted to this subject a considerable portion of such funds as may be available in British possessions, and endeavour should be made to obtain the co-operation of Foreign Powers in Africa. Medical research in treatment and immunity is strongly recommended.

King Edward's Hospital Fund.

The annual meeting of the Governors and General Council of King Edward's Hospital Fund for London, to receive the accounts and the report of the General Council for the year 1913 was held at St. James' Palace on April 30th. The Duke of Teck, who presided, in the course of the proceedings, read the following message from the King:—

Buckingham Palace,
29th April, 1914.

Dear Sir,—I am commanded by the King to ask that the following message may be delivered at the Council Meeting of the Fund, to be held at St. James' Palace to-morrow.

While deeply deploring the loss sustained by the death of one of our great benefactors, Lord Strathcona, and of other friends, we must all be proud of the continued growth of the Fund and of the proof of confidence in its management shown by the most munificent bequest of Sir Julius Wernher, which will be of the greatest service. His splendid example will long be remembered by all interested in hospital work.

Yours very faithfully,

STAMFORDHAM.

In presenting the accounts for the year ending December 31st, the Honorary Treasurer, Lord Rothschild, referred specially to two recent important contributions to the Fund. He pointed out that, as had been announced previously, a considerable sum of money had been received from the executors of the late Sir Julius Wernher, representing the first instalment of the one-twelfth share of the residue left to capital account, to the value of £270,000. As the result of the receipt of this instalment of the legacy, the total investments of the Fund now exceeded £2,000,000. There was another legacy to which he ought to refer; that was the Harman Bequest of ground rents, worth £1,382/3/- a year. The surveyor's report, recently received, estimated the value of this most acceptable legacy at about £25,000.

The Draft Report of the Council for 1913 was presented by the Honorary Secretary, Sir Savile Crossley. The report showed that the total receipts for the year amounted to £187,704/18/-, and the amount distributed to £157,500. During the year the amount spent upon administration was £1/12/5 per cent. of the total amount received. There was a decrease of £5,154 in the total amount of donations and subscriptions, as compared with 1912; but an increase of £36,584/9/9 in the amount of legacies.

The adoption of the report was moved by the Duke of Teck and seconded by the Speaker of the House of Commons.

Personal.

Dr. Frederick J. Bridges has commenced practice at Kempsey, New South Wales.

Dr. J. H. McGee has returned from Europe, and has resumed practice at Melbourne Mansions, 91 Collins-street, Melbourne.

Among the medical officers attached to the Australian Expeditionary Force who were entertained by the Governor-General at dinner at Government House on October 14, 1914, were: Surgeon-General Williams, Colonel Ryan, Lieut.-Colonel Featherston, Lieut.-Col. A. Sutton, Lieut.-Col. Marshall, Lieut.-Col. Sturdee, Lieut.-Col. Dodds, and Captain Wilson.

A charming little episode occurred at the opening ceremony of the new operatnig theatre in the Brisbane General Hosptial on October 12, The Resident Medical Superintendent,

Dr. McLean, whose untiring energy and resourceful activity have been of great value to the hospital, was taken by surprise when one of the lady members of the hospital committee strapped a gold wristlet watch on to his wrist. The watch was presented to him as a mark of appreciation of his services to the hospital. Dr. McLean will accompany the second Expeditionary Force from Queensland, leave having been granted him by the hospital committee.

Dr. R. Lennox Henderson has removed to Crow's Nest, Queensland.

Dr. J. Flynn, of Ipswich, Queensland, has been admitted a Fellow of the Royal College of Surgeons at Edinburgh. Dr. Flynn has been visiting a number of hospitals in Great Britain. He will return to Queensland shortly.

The announcement made in the issue of the "Medical Journal of Australia" of October 10, 1914, that Dr. Hittman was about to take up practice at Cessnock is erroneous. Dr. Hittman has removed to "Lansdowne," Smith-street, Summer Hill, New South Wales.

We regret to announce the deaths of Dr. Sheehy, of Perth, Western Australia, and of Dr. R. R. Harvey, of Kimberley-street, West Leederville, Western Australia.

Medical Appointments.

Dr. L. St. V. Welch has been appointed Government Medical Officer at Abermain, New South Wales.

Dr. Errol S. Meyers has been appointed Resident Medical Officer, Sydney Hospital.

Dr. H. D. Stead has been appointed Medical Officer of Health at Wiluna, Western Australia, Dr. James McGlynn having resigned.

Medical Appointments Vacant

DEPARTMENT OF TRADE AND CUSTOMS.
QUARANTINE SERVICE.

APPLICATIONS are invited for the position of QUARANTINE OFFICER in the Commonwealth Quarantine Service. Applicants must be qualified medical graduates, and must state their age and record of experience.

Salary, £400 per annum.

The position is exempted from the provisions of the Public Service Act or any of its amendments.

Preference will be given, other things being equal, to candidates holding the Diploma of Public Health.

The Successful Applicant will be required to take up duty at Brisbane or such other Station as may be directed.

Applications should be addressed to the Director of Quarantine, 51 Spring Street, Melbourne, and should be lodged on or before October 31st, 1914.

F. G. TUDOR,
Minister for Trade and Customs.

MEDICAL: THREE RESIDENT SURGEONS.

THE VICTORIAN EYE AND EAR HOSPITAL invites APPLICATIONS for the above positions; the applications, accompanied by testimonials, must be in the hands of the undersigned by 12 o'clock noon on TUESDAY, 27th OCT. 1914. The APPOINTMENTS are for the full term of 6 months, with the option of renewal. REGISTRATION by the Medical Board of Victoria is indispensable. PARTICULARS as to hours of duty and remuneration obtainable on application.

The successful applicants must be prepared to enter upon their duties on 1st November, 1914.

By order. J. MILLAR, Secretary.
19th Oct., 1914.

Medical Appointments Sought, etc.

LOCUM TENENS.—M.D. desires Engagement. Apply G.P.O., Sydney, N.S.W., Box 2373.

A LADY, sister of a N.S.W. Doctor, SEEKS ENGAGEMENT with a Practitioner in Sydney or suburbs. Understands book-keeping, sterilizing of instruments, etc. Apply No. 625, "Medical Journal of Australia," B.M.A. Building, 30-34 Elizabeth Street, Sydney.

Diary for the Month.

Oct. 27.—New South Wales Branch, B.M.A., Committee Meetings.
Oct. 27.—Victorian Branch, B.M.A., Eye and Ear Section.
Oct. 28.—Victorian Branch, B.M.A., Council Meeting.
Oct. 29.—South Australian Branch, B.M.A., General Meeting.
Oct. 30.—New South Wales Branch, B.M.A., Ordinary Meeting.
Nov. 3.—New South Wales Branch B.M.A., Council Meeting.
Nov. 4.—Opthalmological Society of New South Wales.
Nov. 13.—New South Wales Branch B.M.A., Clinical Evening.
Nov. 17.—New South Wales Branch B.M.A., Council Meeting.
Nov. 18.—Western Australian Branch B.M.A., Branch Meeting.
Nov. 24.—Victorian Branch B.M.A., Eye and Ear Section.
Nov. 24.—New South Wales Branch B.M.A., Committee Meeting.

Warning Notices.

Medical Practitioners are requested to communicate with the Honorary Secretary of the Branch of the British Medical Association before applying for any appointments referred to below:—

Branch.	APPOINTMENTS.
QUEENSLAND. (Hon. Sec. B.M.A. Building, Adelaide Street, Brisbane).	Brisbane United F.S. Institute. F.S. Lodges at Longreach. F.S. Lodges at Warwick.
WESTERN AUSTRALIA. (Hon. Sec. 230 St. George's Terrace, Perth).	Swan District Medical Officer. All Contract Practice Appointments in W.A.
NEW SOUTH WALES. (Hon. Sec. 30-34 Elizabeth Street, Sydney).	Australian Natives Association. Balmain United F.S. Dispensary. Burwood District F.S. Institute. Goulburn F.S. Association. Leichhardt and Petersham Dispensary. M.U. Oddfellows Med. Inst., Elizabeth Street, Sydney. N.S.W. Ambulance Association and Transport Brigade. N. Sydney United F.S. People's Prudential Benefit Society. Phoenix Mutual Provident Society. F.S. Lodges at Braidwood. F.S. Lodges at Casino. F.S. Lodges at Lithgow. F.S. Lodges at Mudgee. F.S. Lodges at Orange. F.S. Lodges at Parramatta, Granville, Penrith and Auburn. Killingworth Colliery, Newcastle. Seaham Colliery No. 1, Newcastle. Seaham Colliery No. 2, Newcastle. West Wallsend Colliery, Wallsend.
SOUTH AUSTRALIA. (Hon. Sec. 3 North Terrace, Adelaide).	The F.S. Medical Assoc. Incorp., Adelaide.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to the "Medical Journal of Australia" alone, unless the contrary be stated.

All communications should be addressed to "The Editor," "Medical Journal of Australia," B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.